XXIV.

VOL. III. MARCH, 1850. NO. 6.

WESTERN JOURNAL,

OF

AGRICULTURE, MANUFACTURES, MECHANIC ARTS,
INTERNAL IMPROVEMENT, COMMERCE,

AND

GENERAL LITERATURE.

Agriculture and the Mechanic Arts are the basis of Civilization.

M. TARVER & T. F. RISK,
EDITORS AND PROPRIETORS.

CROSBY & NICHOLS, Boston,—Agents.

ST. LOUIS:
PRINTED AT THE ST. LOUIS UNION OFFICE, 35 LOCUST STREET.

1850.

PUBLISHED MONTHLY AT THREE DOLLARS PER ANNUM IN ADVANCE.

JONATHAN JONES'

COMMERCIAL COLLEGE,

SAINT LOUIS, MO.

Incorporated by the General Assembly, January 24, 184[illegible],

WITH full authority "to grant diplomas, award degrees, confer honors, and exercise all and singular, the privileges common to Commercial Colleges, authorized by law in other States."—Charter, Sec. 2.

JONATHAN JONES, Master of Accounts—President and acting Professor of theory and practice of book-keeping, commercial calculations, commercial correspondence, etc., etc.

JAMES W. RICHARDSON, Practical Accountant—Permanent Associate in book-keeping Department.

CHARLES STEWART, Professor of Mathematics—In special charge of commercial calculations.

FLETCHER M. HAIGHT, Esq., Professor of Commercial Law.

JOSEPH P. HORTIZ, Professor of Penmanship.

N. B.—For information in regard to the terms, the course of instruction, and all business connected with the above, call at the "Book-keeping Department," corner of Fourth and Chesnut streets, or address Jonathan Jones, St. Louis, Mo.

JOHN LOUGHBOROUGH,

ATTORNEY AND COUNSELLOR AT LAW,

OFFICE—No. 56 Pine street, near Third, (adjoining that of the Clerk of the Supreme Court.)

THE ST. LOUIS UNION

BOOK AND JOB PRINTING

ESTABLISHMENT,

No. 85 LOCUST STREET between Main & Second,

ST. LOUIS, MO.

THE

WESTERN JOURNAL.

VOL. III. MARCH, 1850. NO. VI.

ART. I.—SHIP CANAL ACROSS THE ISTHMUS, AND PACIFIC RAILWAY.

So much has been said, of late, in respect to Eastern commerce, and of the means of securing a monopoly of the Asiatic trade that we shall neither enter into its history nor undertake to estimate its value in the present article. The attention of the American people, and, indeed, of other nations, is sufficiently awakened to the opening of a shorter route to China, from Europe and the eastern coast of America, to warrant the conclusion that the consummation of this important enterprise, so long contemplated, is near at hand. No one conversant with the resources of this country can doubt that it possesses ample means to effect such an object, and few, we believe, question the policy of appropriating these means to its attainment.

And, were it not for the difficulty of concentrating public opinion upon some certain plan, a canal across the Isthmus, and a central railway across the continent would be commenced as soon as the respective routes could be conveniently located. These routes are both necessary to carry out the great commercial and social idea of the age; for, notwithstanding they may be regarded as links of the same chain, yet, neither can perform the office of the other without inducing incalculable inconvenience to a large portion of the country. In fact, the opening of one of these avenues would increase the demand for the other. Were a ship canal opened across the Isthmus, and no railway constructed through the interior, it would give commercial advantages to the States bordering on the Atlantic and Gulf of Mexico that would be unequal, and, consequently, detrimental to the relative prosperity of the more northern States of the Mississippi valley. Again, should a railway be constructed and no canal opened, this would afford more immediate advantages to the interior than to the maritime States. And, although these advantages would benefit the latter by increasing the facilities of their internal commerce, yet, it would be unjust to leave them without the means of a more direct and cheap communication with the western coast of this continent, and with Asia. Happily, however, for the country and the cause of

civilization, these two works may be accomplished without interfering in the slightest degree with each other; and hence every attempt to connect them, so as to make them dependent projects, to depreciate the value, or, enhance the merits of either beyond their true importance, is calculated to injure the cause of both. Entertaining these views, we deprecate the effects which are likely to be produced by the publication of the address of Lieut. Maury, to the members of the Memphis Convention, which appeared in the Louisville Journal in December last. Like every thing from his pen, this address bears the impress of genius; nor, is there the slightest cause to doubt his enthusiasm in favor of both routes. Yet, we fear that, owing to his especial advocacy of a ship canal, and, of the Gila route for the railway, he has weakened, though undesignedly, in the opinion of many, the claims of a railway from the Mississippi to the Pacific ocean.

His arguments in favor of the railway are based, mainly, upon its importance as a means of national defence: the weakest of all arguments that could be addressed to the American people. Apprehensions of invasion by foreign nations is, perhaps, a subject that less than all others disturb their minds. And, unless it can be shown that their individual interest and the general prosperity of the country will be promoted by the enterprise there is little prospect that they can be brought to act upon the subject. It is true that he anticipates a large commeercial business for the road; but, at the same time enters into estimates to prove that none of the leading staples of the west will bear transportation over it to a market. Upon this head he says:

"All articles which exceed a certain value, according to bulk, will go over this railroad, and the list of them is large.

"But there is a large class of articles which are not valuable enough, according to the bulk, to pay freight over this railroad, and which, therefore, can never pass from one end to the other of it.

"The ability of a railroad to carry on a thorough commerce is inversely as to its length. The longer the road, the greater the aggregate amount of tolls from end to end, and the fewer the articles that can afford to pay those tolls.

"Iron, coal, and plaster, are of all commercial staples the cheapest articles for railway transportation.

"A ton of them occupies the smalest space; they require open cars of the cheapest kind, they are stored not in houses, but out of doors. They require no protection from the weather and are not liable to damage by being thrown off the track, nor by any accident of the road, and therefore the road can afford to take them cheaper than it can flour, beef, pork, sugar, and the like. Taking the mean of the tariff upon these cheap and heavy articles established by fifty odd railways in the United States, I find the average rate of freight over them to be on coal and iron 4 1-2 cents per ton per mile.

"Now, considering that this railroad is to pay no dividends—that Government will allow individuals to run their own engines and cars over it for such tolls as may be sufficient, or, in part, sufficient to keep it in repair, and that flour, sugar, and the staples of the West, can be carried over it for one-third less than coal and iron can be over the private railways—with this supposition, let us see what articles can never go from one end of this road to the other. It is easier to tell

what this railroad cannot do than to tell what it can do, for it will be so powerful for good, and it can do so much. As a general rule, in commerce, it may be assumed that but few articles can well afford to pay more than one-third (33 1-3 per cent.) of their value to get to market.

"The length of this road with detour will probably be none short of 2,000 miles, which at 3 cents the ton per mile will require 60 dollars the ton for merchandise to go from one end of it to the other. This is exclusive of the cost of getting those articles from the place of production to this end of the road, and of the cost of getting them from the other end to market, as to China and the Indies, both of which together may be taken at not less than ten dollars the ton.—Total tolls to market by railway, seventy dollars per ton.

"Now, I will ask the planters and the farmers and the miners of the great valley of the West, if their wheat, their lead, their flour and tobacco, their coal and iron, and hemp and corn, their beef and pork, and cotton and rice, and sugar—if any of these great staples can afford to pay sixty dollars a ton to get a part of the way to market, simply to get from the depot at one end of the road to the depot at the other.

"Ingenuity is great,and invention is ripe in the land. I am, therefore, not prepared to say, that the time will not arrive, when, in consequence of inventions and improvements yet to be made in railways, cars, and the engine, merchandise may be taken at one cent or even at a less rate per ton the mile, over railways. But no such improvements are known at present, and, in estimating the effect of a work like this, the only true guide which we can follow is that afforded us by the lights of experience—consequently, in estimating as to what this road can do, we must take things as they are.

"Tea is worth $2,000 the ton. Tea, therefore, can traverse the road and pay the tolls to the amount of $60 the ton, by paying 3 per cent. only on its value. But corn at fifty cents the bushel must pay some three hundred per cent. on its value to get over this road.

"A ton of silk may be transported over it for perhaps one or two per cent. of its value. But coal which costs $1 50 the ton at the mines, would have to pay forty times its value to get over the road.

"It is aquestion whether any article of less value than $280 per ton (and most all articles of commerce exceed that) could ever seek a market over the road by paying through tolls.

"The subjoined table shows the average or usual value per ton, of our principal agricultural staples in their crude state. The expense of getting a bale of cotton to market in England, after it is pressed on the plantation, including the cost of transporting to railway or steamer, thence to the place of shipment, including wharfage, &c., and thence to England, may be assumed on the average to be $6 the bale, or 20 per cent. of its value, assuming $30 as the price of a bale of cotton. But, instead of 20 per cent. let us suppose that cotton and all our great staples can afford to pay 40 per cent. of their value for the sake of the markets at the other end of the road.

"Even with this extravagant assumption, the figures by the subjoined table show that not one of the great agricultural or mineral staples of the country could afford to go in their crude shape from one end of

the road to the other, with the view of seeking a foreign market in the Pacific:

	Value, per ton.	*Tolls, 40 per cent.*
Corn at 50 cents per bushel is worth - - -	$22 00	$8 80
Wheat at 75 cents per bushel is worth - -	27 75	11 10
Pork and beef at $13 per bbl. - - - - - -	143 00	57 20
Hemp at $80 per ton - - - - - - -	80 00	32 80
Tobacco at 6 cents per lb. - - - - - -	134 40	52 80
Sugar at 6 cents per lb. - - - - - - - -	134 40	52 80
Rice at 4 cents a lb. - - - - - - -	88 00	35 20
Cotton at $30 per bale - - - - - - - -	150 00	60 00

"But they are all required to pay $60 per ton to get over the railroad. They can be placed at the other end of the road by going around Cape Horn, for $25 the ton. Would the saving of time by railway as compared with Cape Horn, compensate for the difference of expense on such articles in ordinary times? I think not. It is obvious, therefore, that not one of these articles at usual prices and at present railway rates can afford to seek a market by this route.

"They are the staples of commerce, the basis of our national wealth. Therefore, there is a link required to make this railroad complete, and that link is a railway immediately, and a ship canal, as soon as one can be built, across the isthmus which joins North and South America together."

We have never supposed that many of our western staples could be transported across this road for the Asiatic trade; but were the freights much higher than Lieutenant Maury's estimates, yet, the western States of the Mississippi valley would supply the mining region of the Sierra Nevada which promises from present appearances, to become the most extensive and profitable market for western produce that can be found upon the Globe. But, with all our respect for the information and fairness of the author, we must say that, in our opinion, his estimates of the cost of transportation are too high. We have not undertaken to ascertain the average cost of freights upon all the roads in the United States.

We know, however, that the rate is high on some of the older roads; again, a great number of the roads are short, and on these the labor of loading and unloading necessarily increases the rate of transportation. We have taken the Western road from Worcester to Albany, as affording, perhaps the fairest data for estimates on the Pacific railway. The Western road is 156 miles in length, with a branch 18.65: in all 174,65 miles, and cost, including stations and machinery, over $50,000 per mile. The rate on this road for sugar, salt, butter, grain, iron, coal, lumber, and groceries is $2,56 per ton, of 2,000 lbs per mile. The income on this road in 1847, was $1,325,336; and the expenses $676,690, about one half of the gross receipts; and yet the company declared a dividend of 8 per cent. Now, here is a road which, with its fixtures and machinery, cost over $50,000 per mile, carrying produce at the rate of $51,20 per ton for 2000 miles and paying 8 per cent on the capital invested.

Any opinion which could be given at this time in regard to the rate of transportation, on the Pacific railway, would be entitled to but

little respect; but it is, however, reasonable, we think, to estimate the rate at not more than $35,00 per ton; provided no dividends are required to be earned on the capital invested in the construction of the work.

But while we are of opinion that the author has estimated the rate of tolls too high on the railway, we are so unfortunate as to think that his estimates by the canal and ocean route are too low. We extract the following paragraphs to show his estimates of charges on this route.

"Seeing how much the dangers of the sea would be lessened by opening this canal, and consequently how much the rate of insurance would be lowered—how much the average rate of sailing under canvass would be increased with the trade winds free, and how much the voyage would be shortened—how small the crew and how trifling the expenses of navigation would be—it is not unreasonable to anticipate that this ship canal would enable us to deliver our cotton, our lead, perhaps our iron, but certainly our rice, wheat, corn, flour, beef and pork, hemp, and tobacco, in the markets of China, India, New Holland, and Japan, at a less rate of freight than we can deliver them in Europe. The lead could go for nothing, as it now does to Europe, for it would serve as ballast.

"The rule which governs the rate of freight in sea voyages under canvas, is the average length of time which it will take a ship to load, perform the voyage, and discharge cargo. If a ship have a cargo on board, it costs no more to sail than to lie at anchor. Her expenses are the same in either case. We see by viewing the matter in this light why the freight is proportionally so much heavier for short voyages by sea than for long. Because in short voyages such a considerable portion of the time is taken up in waiting for freight. A ship that has to make a voyage of 20,000 miles for instance will charge in proportion to the distance much less freight than a ship will which has a voyage of only 2,000 miles. This last may be but 10 days in making the voyage, but it may take her 10 days to load and a week to unload, and a further delay of some days before she can get another cargo. All these are considerations which, in establishing her rates of freight, have to be taken into account by her; whereas, the ship on the long voyage is certain of employment for a longer time, but a small proportion of her time is taken up in loading and unloading and in hunting for a fresh cargo. Therefore, the rates of freight are proportionally less per long than per short voyages.

"A ship going around Cape Horn, with her expensive equipments, heavy crew, dangerous navigation, and large insurance, charges for freight at an average of 12 1-2 cents per ton per day. That is, a ship carrying 1,000 tons of merchandise around Cape Horn to Lima will be 120 days making the voyage, and will charge $15 per ton, which as before stated gives 12 1-2 cents per ton per day.

"Now, then, a ship sailing through this ship canal would make the voyage to China in sixty days, and, for the reasons stated, at much less—say one half—than the cost of the Cape Horn voyage.

"The voyage, being but half the length of the other, should, if the expenses of sailing were the same, be only one-half the Cape Horn freights.

"But the expenses by the canal being so much less, and the wear and tear of ships being scarcely appreciable, let us suppose it will be just one half—this would give from New Orleans and our Atlantic ports $7 50 per ton to China and India, and less to New Holland and all the islands of the Pacific, and, by the same rule, $5 only to Peru and South America. At this rate, the cost of transportation to India and the Pacific markets, from the Gulf and Atlantic ports of the United States, would be for—

Indian Corn, say	10*a*17c	per bushel.
Flour,	50*a*75c	" barrel.
Beef and Pork,	50*a*75c	" "
Tobacco,	$5*a*$7 50	" "
Rice,	30*a*37c	" hundred.
Sugar,	$5*a*$7 50	" hhd.
Cotton,	$1*a*$1 50	" bale.

It is thus perceived how this canal would bring Asia and the multitude of markets in the Pacific ocean to be down stream from us. Who can calculate how immense the advantages are of having the favor of both winds and currents in carrying for us to market those cheap and bulky articles which constitute our staples, and which cannot afford to pay so heavily for conveyance as the more light and valuable articles can?"

Surely no individual ought to be better acquainted with this branch of the subject than Lieut. Maury; but we do not comprehend how produce can be transported at as low rates from our sea ports to China, as to Europe. Indeed some of the articles in his list are put down at a much lower rate. He supposes that Cotton can be shipped at from one dollar to one dollar and fifty cents per bale. By reference to tables showing the rates of freight from New Orleans to Liverpool, Havre and New York, on the 1st day of each month for two years, ending in 1848, we find that the prices for cotton to Liverpool during that period, ranged from three-eighths to one penny per pound; which is equal to from about three to eight dollars per bale. The lowest price to Havre during that period was 7-8d. per pound; and it is quoted but twice below 1d.; and in one instance as high as 2d. per pound.

The price to New York, during the same period, ranged from one quarter to one and one-eighth cent per pound; and the average per bale, (supposing it to weigh 450 lbs.) during the period, was $2 56—about double Lieut. Maury's estimates to China. The freight on Tobacco from New Orleans to Liverpool, ranged, during the same period, from 30s. to 57s.; averaging about 41s.—equal to nearly $10 00 per hhd. Lieut. Maury estimates the cost to China at from $5 00 to $7 50 per hhd.

Nor has he been more fortunate, in our opinion, in his arguments in favor of the Gila route for the railway. We make copious extracts from this part of the document, lest we should do injustice to the author. He says:

"There is another point of view in which this work becomes an object of great National concern—California has turned to gold at our touch, and should it continue to supply that precious metal according to the ratio that it has already done, the proportion of gold to silver in

the world will be changed, and, consequently, an alteration in the respective value of the two metals may be expected.

"Gold is sixteen times more valuable than silver, because silver is sixteen times more abundant than gold—in other words the earth has hitherto yielded to the labor of the mines sixteen ounces of silver to one of gold. Should the amount of gold from the California mines change these proportions, so as to give for example, an ounce of gold to ten of silver, gold then will be only ten times more valuable than silver—as we lessen the value of gold, we shall, in the same proportion, lessen the value of California mines and sustain a double loss—a loss with the rest of the world in the depreciation of our gold coin, and which loss will be proportionate to the amount of our gold circulation, and a loss in depreciation in the value of the gold mines in California. To prevent such a calamity, it becomes an object of great National concern to stimulate the working of silver mines and to preserve the relative proportions which now exist as to the quantities of gold and silver. It is obvious that if the mines of California shall continue to furnish yearly fifteen or twenty millions to the gold calculations of the world, without a corresponding increase in the supplies of silver, the gold coinage of the world will become plethoric, and the whole amount of the gold depreciation or the largest portion of it will be sustained by us. The Pacific Railroad will serve in a manner to prevent such a loss.

"The silver mines of Mexico are inexhaustible and exceedingly rich, but they have ceased to be worked with activity, partly from the scarcity and consequently high price of quicksilver, and partly from the want of proper engines for pumping and working the mines.

"These had to be transported from Vera Cruz or other Mexican ports, across the mountains on the backs of mules, and, therefore, at an enormous expense. It needs no argument to show that very powerful engines cannot be moved on the backs of asses, and that many mines, which now cannot be worked, on account of the difficulties of drainage, the want of proper machinery, and the expense alluded to, would, if the expense of transporting the quicksilver and machinery to the mines, and the silver to the sea were lessened, be worked with great profit.

"It so happens that simultaneous with the discovery of gold in California, quicksilver mines of great value were also discovered there. Here, then, is a new source of supply of this metal for amalgam to the silver mines.

"Now the Pacific Railroad—should it take the Southern route, and this, supposing the Southern route to be as practicable as the more Northern one, should be a more powerful reason in its favor—will pass near the great mining and mineral districts of Northern Mexico. Private enterprise will shoot out branches in that direction, from the main stem, and quicksilver in abundance and machinery of ample power and capacity can then be delivered in the vicinity of the mines, cheaply and without difficulty, over this railway, and thus new life and vigor will be given to the working of the silver mines there, while we are at the same time providing for the common defence.

"Nor would the beneficial effects of this road upon these mines end here! It would turn their produce from the ports of Mexico, and

bring to this country, in exchange for the manufactures of New England, and other "Yankee notions."

"A southern route would bring the road near the northern provinces of Mexico, which are the richest and most desirable portions of that country, and all the people there, who could be supplied with articles of foreign merchandise more cheaply through our own country and over this road than they can through the ports of Vera Cruz and Tampico, and over the mountains on the backs of mules, would naturally depend on the railroad for their supplies. The extent of country to be thus supplied will be bounded by the line at which the freight and tolls on a bale of merchandise dragged by the iron-horse of the North, can meet with equal charges a similar bale brought on the backs of mules from the seaports of Southern Mexico. Below this line, the people of Mexico would continue to receive their supplies on the backs of mules, as heretofore; above it, their commerce would take the new and cheaper channel that this railroad would open.

"This dividing line between the locomotive and the mule cannot be distinctly drawn until the railroad shall have been in operation. But it may be safely assumed that the portion of Mexico that will then become tributary to the Pacific road and to the work-shops of New England, will not include less than three millions of people.

"A National monopoly in commerce with three millions of people who manufacture nothing, want everything, and who have nothing to give in return but uncoined silver and the precious metals! Was ever a commercial people offered such a temptation! There are no people in the world who buy of foreign merchandise more freely than the Spanish Americans. There are twenty millions of people in the United States. We import annually about one hundred millions of foreign merchandise. This gives an average yearly consumption of $5 worth, *per capital*, of foreign goods, notwithstanding we manufacture ourselves so largely and so extensively.

"The average annual consumption of foreign merchandise, *per capital*, in Cuba, is some forty or fifty dollars. But suppose thatthe Northern Mexicans, with the cheaper supplies and the increased facilities to buy which this road will afford them, shall, notwithstanding that they manufacture nothing, only buy on the average as much as the people of the United States, who manufacture almost everything, that will give an internal commerce at once of fifteen millions of dollars the year, which we will both fetch and carry, and which will be paid for mostly in bullion. These are but a portion of the advantages offered by this route for the road.

"There are the Mormons of Deseret and the people of New Mexico. who have now and for years will continue to have as much as they can do in contending with the wild beast and the savage of the forest, and in subduing the earth with the hoe and the plow.

"As with our Northwestern and Southern States, several generations will probably pass away before they will have the earth sufficiently subdued to turn their attention to manufacturing.

"They will, therefore, afford to the manufacturers of the East an immense business over this railroad. The old Santa Fe trade that was carried on by mules, will be nothing in comparison to it.

"The people of the Eastern States especially, have a stake deeply and richly set in this road, and, therefore, for sectional and moral as well as great national considerations, they are invoked to come forward in support of this great high tower of national defense, of power, and of greatness, and to unite with the people of the Memphis Convention in declaring themselves in favor of *the* route, and in pledging themselves to go for it, by that route, which, being practicable, shall best subserve the great purposes of national defense.

"The Memphis Convention, with a patriotism and a broad feeling of true nationality, which is beyond praise, laid aside all local prejudices and sectional jealousy, and declared itself in favor of the road to begin at the best point and to take the most suitable route, wherever that route and that point shall be found to be. It asked for the necessary surveys and examinations of the different routes, and expressed the opinion that the route commencing at the San Diego, thence up the valley of the Gila to the borders of Texas, between the parallels of 32 deg. and 33 deg. of north latitude, and thence to some point on the Mississippi between the mouths of the Ohio and the Arkansas, was worthy particular examination.

"The Convention acknowledged what we all feel—that information is wanting to enable us to decide as to the best route.

"The routes which seemed most to occupy the attention of the Convention, was the route just indicated, and the routes from Memphis, from St. Louis, and from some part intermediate between these two, as from the mouth of the Ohio to San Francisco or Monterey. The delegates from the northern valley States were in favor of a still more northern route.

"Now, in order properly to understand the claims of these several routes, let us suppose that, as far as topographical features and facilities for constructing the road are concerned, all of these several routes shall be found to be equally practicable. Upon what principle is the choice of routes to be made? That route should be selected which, being topographically practicable, will best subserve the great purposes of National defense as far as it can be done consistently with this great and prime object.

"The route may be modified so as to better subserve the great interests of commerce in peace, and the eastern terminus may be located so as to be most acceptable to all the States and convenient to the people.

"In the first place, let us see, always supposing all the routes to be equally practicable, which will best subserve the great object of national defense.

"The eastern terminus of that route is obviously the navy-yard at Memphis, where the immense naval resources of the Mississippi valley in war are to be gathered, and from which sails and cordage, rigging, provisions, and every item in the catalogue of ship chandlery, with men, and munitions of war, are to be poured in upon the Pacific over this road and its western branches to San Diego, Monterey, and San Francisco. If Government do not build branches to these ports on the Pacific, our citizens will.

"The southern route is the best for National defense because it will not be obstructed by the snows of winter, and will, therefore, be

vailable for the purposes of transportation at all times of the year.

"This route is better than one further to the North would be, because it would enable the Government at less cost of money and with less risk of life to preserve the nation's faith solemnly pledged before the world, by treaty, to protect Mexico from Indian incursions.

"With or without this road, military posts must be established along that frontier to carry out this article of the treaty. Having the road, a smaller force will be required for this service, and the same posts can execute the treaty, protect the road, and assist to keep it in repairs also. Therefore, as a matter of efficiency, as a work of national defense, and as a measure of economy to the nation, this route should be preferred, always supposing it to be practicable as it regards topography.

"Another consideration in favor of the southern route is to be found in the impulse which the road by that route would give to the working of the silver mines of Mexico and to the commerce with that country for which it would serve as a channel, and to which allusion has already been made.

"This work is to be built by the States out of a general fund, and for the common good. It should, therefore, commence at some central point on the Mississippi river, and which should be that point which is the most convenient to all the States for access. Nature and the internal improvements of the States indicate clearly enough where the point is.

"It is that point which is on the Mississippi river and is midway the valley between the head of the Gulf and the foot of the Lakes.

"It is that point between which and the Gulf the navigation of the river is at all times open.

"It is that point which the people of Iowa, Wisconsin, and Missouri, may reach with the advantages of down stream navigation.

"It is that point which is accessible to Illinois, Michigan and the Lake country through the Illinois canal, and which is also of convenient access to Indiana, Ohio, and Pennsylvania, with parts of Kentucky and Virginia, by the Ohio and Mississippi rivers.

"It is that point toward which Alabama, Florida, Georgia, the two Carolinas, and Virginia, are projecting and extending their railways.

"It is that point the route from which should be accessible to Texas and Arkansas as well as all the States. And that point is the city of Memphis, in the State of Tennessee. Memphis is 860 miles from the Gulf and 840 from Lake Michigan.

"It would be more convenient for Missouri, Iowa, and Wisconsin to meet the terminus of the road at St. Louis. But it would not add as much to their convenience as it would take from the convenience of Texas, Tennessee, Arkansas, and other States.

"Pennsylvania extends from the sea to the Lakes, and the people of all the States to the east of her who wish to travel by railroad must cross her borders to get to the terminus of the Pacific road, and whatever terminus and route be most convenient to her citizens will be most convenient also to the citizens of the States to the east of her. The routes of travel and channels of communication between Pennsylvania and the Mississippi river are various, and they are increasing in number, and, as a matter of convenience to her people and those of

New England, it will be about the same whether they have to come to Memphis or go to St. Louis to get upon this National road.

"If they come by the Lakes, they will find St. Louis most convenient; if they come by the way of Pittsburg, they will find Memphis quite as convenient as St. Louis.

"But if they come by sea to New Orleans or Charleston, or via Baltimore and Washington, over the Virginia and Tennessee railroad, the people of New England and New York will, in every one of these cases, find Memphis the most convenient point of departure for California.

"But as the road is to be built by the common property, or funds of all the States, and as they expect that the value of the public lands in the States through which this road is to run will be increased thereby, they may probably object to the Memphis route on account of Texas, and apparently not without some show or reason, for one of the collateral inducements for them to build the road is to be found in the expectation that it will greatly enhance the price and the sales of the public lands in the States and territories through which it may pass.

"If Memphis be adopted as the terminus, the road will probably pass through Texas, in which the General Government owns no lands.

"They belong to Texas, the roads will vastly increase their value, and the older States may object that their common property shall be so applied as to benefit one member of the confederacy to such an extent as a road built at their expense through Texas would benefit Texas.

"It is, therefore, submitted to the justice and patriotism of the people of Texas, whether it would not be wise on their part to imitate, to some extent, the example of Virginia in the noble disposition which she made of her Northwest Territory. That gallant old State had the right of eminent domain over Ohio, Indiana, and Illinois, but she generously ceded it all to the nation, and it was accepted without condition, save and except that slavery and involuntary servitude should never exist there forever. The extent of the imitation suggested in behalf of Texas is, that that State should concede at once and forthwith so much of her lands, lands belonging to the State, as may be necessary to carry the road through that State.

"Such an act of generosity would not be without its reward. There is in Texas, and the contiguous territory, an immense region which is a natural vineyard.

"The vines are cropped by the buffalo and the wild beasts. Thus dressed they produce the finest of grapes, which are pronounced by the German emigrants, who are preparing to cultivate them, to be capable of producing wines superior to the German wines. The roads would open that trade to Texas.

"Moreover, the embryo State of Deseret is mostly an inland basin, which has no sea drainage, and which, therefore, can never have any communication with the ocean except by railroad. Texas is the nearest to that basin, and, having less distance to send her produce, will, therefore, have the monopoly of supplying that State with many of the articles of commerce. Such an act on the part of Texas in giving

the lands would only be "casting bread upon the waters," for she would gather it all again when the road shalll be, as no doubt it will be, ceded to the States in which it may lie."

Having first based his argument in favor of the railway, upon the ground of National defense, he now brings it to bear upon the Southern or Gila route, provided this route should be found equally practicable. But he does not rely upon this alone: he brings up others to its support: it is to be the means of opening the silver mines of Mexico, by which the "calamity" apprehended from a change in the relative value of gold and silver is to be averted; it is to give us the commerce of three millions of Mexicans, whose bullion is to enrich the manufacturers of New England. Now, upon an examination of the map, it will be perceived that the provinces of Sonora and Chihuahua extend from the Rio del Norte to the Gulf of California; also, that they are about 400 miles long from north to south; and, according to McGregor, these provinces contain only 271,600 inhabitants. Cohahuila contains, according to the same authority, 75,340 inhabitants; and if we suppose that one-half of these reside in the northern half of the province, we shall only find a Mexican population of 309,270 within about 400 miles of the railway. And if we include Cinaloa, Durango, and all Cohahuila, we should then find a population of only 656,558 within the distance of 600 miles of the road; and the greater portion of these reside much nearer the Gulf of California, the Pacific Ocean and Gulf of Mexico, than to the road. Now, we think, it can scarcely be expected that New England manufactures will be transported over railroads from Boston to the Gila, and, then packed on mules a distance of more than 500 miles, when they could be carried by sea to points more convenient for distribution, and at cheaper rates. Another argument in favor of this route is, that it will enable the people of Texas to send their produce to Deseret! Now, should the road be located in the valley of the Gila, it would not pass nearer than about 500 miles of the Mormon settlement. The nearest point would be about midmay between the Rio del Norte and the Pacific; and from this point we know of no road through the mountains leading into the valley of the Salt Lake, over which commerce could be carried, without returning east, and going through the South Pass. Truly, this Southern route is made to perform most astonishing offices! But admitting that it should be found serviceable as an agent in defending the Mexicans against the Indians, yet, our territory is infested with savage tribes for more than one thousand miles north of this line; and, do we not owe protection to our own citizens as well as to the people of Mexico? And were it true that this route would secure the commerce of 3,000,000 of the Mexican population, yet, would it not be better that we should, by locating the road through the centre of our own territory, encourage a continuous chain of settlements from Misssouri to San Francisco, and thereby furnish our own citizens with commercial facilities for 500 miles on each side, than to give one-half of its advantages to another nation? Indeed, to our mind, the proximity of the southern route to the Mexican line, is the strongest objection that can be urged against it.

But again, every one must admit that the gold of California constitutes the principal attraction of that country; and it would cost the emigrant to the gold region, about as much to travel from any point on the southern line to the Placers, as it would to go there from Missouri, were the central road in operation. The central route would pass through both Deseret and the gold region of California; and it would seem to be a reasonable policy, on the part of our Government and people, to aim at the development of our own mineral wealth, rather than construct a railway with a view to the encouragement of mining in Mexico.

Besides, considering the Pacific railway as a national work to be constructed at the national expense, it would, in our opinion, be unjust to locate it so far south as the Texas and Gila route, provided a practicable route can be found farther north. For, should a canal be opened across the Isthmus, that portion of our population which is located in the Atlantic and Gulf States would, for most purposes, have a cheaper route to the Pacific, and, consequently, but little use for the road; while the inhabitants north of the route possess no such advantages. We have no apprehension, however, that if a railway should ever be constructed to the Pacific that it will be located on the Southern route. But, aware of the influence of the author's opinions upon the public mind, and believing that he has not given sufficient consideration to the arguments in favor of the northern region of the western States and territories, we have esteemed it our duty to show wherein our views differ from his; and, moreover, we were unwilling that his arguments should remain unanswered, lest the friends of the southern route should conclude that they were impregnable.

ART. II.—LEWIS AND CLARKE'S EXPEDITION TO AND FROM THE PACIFIC.

Even previous to the purchase of the colony of Louisiana, the expansive and far reaching mind of Mr. Jefferson—that man of genius and judgment, of science and common sense—had anticipated the day when the energy and enterprise of American citizens would span the continent,—republican institutions diffuse themselves to the shores of the Pacific,—and the chain which binds the great confederacy of free States would encircle in its adamantine links the sovereignties of the eastern and the western shores, and he was then preparing and maturing a plan for the examination of this broad territory by competent American agents. On the 18th day of January, 1803, more than three months prior to the treaty of cession, by a special confidential message he recommended to the Congress of the Union that steps should be taken without delay for the accomplishment of this interesting object. The Congress having concurred in the view of the President and conferred upon him the requisite authority, he forth-

with commissioned Captains Merriwether Lewis and William Clarke, to explore the river Missouri and its principal tributaries to their sources in the Rocky mountains,—surmount their rugged and precipitous heights, and snow crowned ridges, and trace to the Pacific some stream "whether the Columbia, the Oregon, the Colorado, or any other which might offer the most direct and practicable water communication across the continent for the purposes of commerce." The letter of instruction drawn up by Mr. Jefferson himself further directs them to fix the latitude and longitude of all the remarkable points along the courses of these rivers to observe with attention the soil and face of the country, the animal, vegetable and mineral productions, the geological structure, and the climate with its successive changes in time and elevation; and to collect all the facts relative to the past history and traditions of the Indian tribes, their locations, characteristics, manners, habits, wars, laws and usages.

Merriwether Lewis was born on the eighteenth day of August, 1774, near Charlettesville in the county of Albermarle, Virginia, of a distinguished family. Fielding Lewis, an uncle of his father, married a sister of General Washington, his father William Lewis was the youngest of five sons of Col. Robert Lewis. Two of his father's brothers became officers in the Revolutionary army, and rendered substantial service to the cause which their whole family had espoused with unanimity and ardor. One of these, Nicholas, at the close of the war, commanded a successful expedition against the Cherokees, who, seduced by the agents of the British Government, had committed great havoc upon the frontier, by the murder and scalping of many helpless females and innocent children. He subsequently became the guardian of the subject of this memoir. The mother of our hero was of the respectable family of the Merriwethers, and to her tenderness, intelligence, and care, he owed those estimable traits which marked his subsequent career. After receiving a substantial education, and evincing a sound knowledge of practical affairs he entered as a volunteer in the body of militia called out to suppress the contemplated Pennsylvania insurrection and soon rose to the rank of Paymaster.

Whilst in Paris the mind of Mr. Jefferson was turned to the subject of western discovery by the well known attempt of John Ledyard, (whose views he warmly seconded) to traverse Siberia and Kamschatka, and from thence cross to our continent and explore its interior. The failure of this attempt occasioned by the jealousy of the Russian Empress only served to impress the design more deeply upon the mind of Mr. Jefferson, and in 1792 he proposed to the American Philosophical Society to employ by subscription some competent person, to explore the western regions by land. Capt. Lewis warmly solicited this position. Mr. Jefferson told him that it was contemplated that the person engaged should be attended by a single companion only to avoid exciting the Indians, but he still persisted in his solicitation. M. Andre Micheau, the illustrious author of the Flora *Borealis Americana*, offering his services they were accepted, and after receiving his instructions and proceeding as far as Kentucky, he was compelled to relinquish the undertaking by a peremptory order of the Minister of France.

In 1803, the act for establishing Trading Houses among the Indian

tribes, gave occasion to the confidential message already noticed of the 18th January. At the time of his receiving this commission Captain Lewis had been for nearly two years the private Secretary of the President, and with an intimate knowledge of his character thus acquired, Mr. Jefferson says that he was "of courage undaunted; possessing a firmness and perseverance of purpose which nothing but impossibilities could divert from its direction, careful as a father of those committed to his charge, yet steady in the maintenance of order and discipline; intimate with the Indian character, customs and principles; habituated to the hunting life; guarded by exact observation of the vegetables and animals of his own country, against loosing time in the description of objects already possessed; honest, disinterested, liberal, of sound understanding, and a fidelity to truth so scrupulous that whatever he should report would be as certain as if seen by ourselves."

A few days subsequent to the reception of his instructions by Captain Lewis, the news of the treaty of cesssion was received at Washington, and the passport of the French Minister, which had been obtained, became necessary. He left Washington for the west, and at Louisville was joined by Capt. Clarke, from whence they proceeded to the Mississippi river, where they were detained until the following spring, by the delays which preceded the surrender of the country, which did not take place until late in December, 1803. They made an encampment at the mouth of Wood river, opposite that of the Missouri, where they remained until the succeeding spring.

The party consisted of nine young Kentucky volunteers, fourteen soldiers of the regular army, two French voyageurs (an interpreter and a hunter), and a black servant of Capt. Clarke. In addition to these, a corporal and six soldiers were engaged to accompany them as far as the Mandan village, in consequence of some apprehensions of Indian attacks. The stores were divided into seven bales, and one box containing a small portion of each article, as a resource, in case of accident. They consisted of clothing, utensils, locks, flints, powder and ball. To these were added 14 bales and one box of Indian presents. They embarked in three boats. The largest was a keel, 55 feet long—of three feet draught,—with one sail and 22 oars; and with a forecastle and cabin at the bow and stern, and lockers in the middle, so adjusted as to be raised for a breast-work in extremity. This was accompanied by two pirogues of six and seven oars; and two horses were led along the bank of the river for hunting.

On the fourteenth of May, 1804, the party entered the mouth of the Missouri. All which they had heard tended to excite deep interest—early adventurers had given glowing accounts of the region bordering the river, and the stories of the old fur traders teemed with marvellous adventure, and extraordinary dangers and escapes. With the aid of the sail, when the wind was favorable, and of the oar and cordelle when otherwise, they steadily ascended the turbid current, treading their way through swarms of snags and sunken trees, and rounding low islands and bars, covered with stunted cottonwood and willows, or shifting too rapidly to gather vegetation. On the eleventh day they landed at the little village of *La Charette*—the remotest white settlement upon the river. After bidding a final adieu to these last brethren of their own, whose faces they had so good reason to apprehend they

might never see again, their voyage was resumed. The broad, deep, alluvial bottoms bounded by distant ridges and bluffs, were densely covered with grapes, shrubs and flowers. The witch hazel, the alder, the willow, the paw-paw, the haw, and other small trees and bushes, were overshadowed by stately forests of walnut, poplar, linden, hickory, and cottonwood. They passed successively, many perpendicular walls of primitive limestone, on some of which the Indians had painted the images of their Manitous, whilst others threatened to crush the adventurers upon the stream over which they had stood the solitary sentinels of ages past. They met many rafts and canoes, loaded with the rich spoils of the mountains and plains. Some of these had descended the Osage from the spurs of the Ozark—others had brought down the rewards of the past year's trade upon the Kansas,—others had been freighted at the Pawnee villages upon the Platte,—and others had descended through robber bands, and varied hazards from the upper tributaries of the Missouri. The hardy men who manned those frail craft lightened their lots with many a song, the cadences of which harmonized with the measured stroke of the oar, and exhilirated their spirits around their camp-fires, by uproarious jests and stories of wild and perilous adventure.

The wild fruit became daily more abundant, crab-apples, mulberries, persimmons, plums, blackberries, goosberries, raspberries and grapes suspended in festoons, were scattered along the river valley, and the fish-hawk, the swallow-tailed falcon, the warbler, the blue bird, the swallow, the paroquet and other feathered songsters, sported and piped through the forests. At the mouth of the Kanzas, the first buffalo was seen. They observed a number of old Indian villages and trading houses, successively abandoned for positions farther westward as the game became exhausted. Forest trees of noble proportions adorned the vallies as high as the Big Sioux river, and the uplands and broad savanna's were garnished with a rich profusion of succulent gramina and brilliant flowers. The spectacle of a boundless succession of graceful undulations, expanding in every direction until they seem to mingle with the dim horizon, creates emotions which imagination can scarce conceive, and language is too barren to convey. Rain had occasionally descended, but not in remarkable quantities ; and such was the transparent purity of the atmosphere when the watery vapor was dispersed by the ever-active winds, that intensely brilliant rainbows spanned the skies, and the refracted light created a multitude of living pictures. Upon the Nemahaw, a number of mounds, and inscriptions on rock, similar to those found throughout the Mississippi valley, were examined. In their ascent they had met with parties of the Kanzas who resided about fifty miles above the mouth of that river, —of the Ottoes and Missouries, whose villages were near the mouth of Platte river—of the Pawnees, settled on the Loup fork of Platte—and of the Omahas, living just above the mouth of that great river. Passing the mouth of the Platte, six hundred yards in width, they paused on the 3d of August, at *Council Bluffs*. This is an elevated eminence, commanding an extensive and interesting view of the plains for many miles in every direction, and was selected by Captains Lewis and Clarke as an appropriate position for a military post. The suggestion was appreciated and acted upon. The name was bestowed

upon it in consequence of their having here collected representatives from each of the captious and quarrelsome tribes before noted---at this place---held a council---settled their difficulties, and smoked the pipe of peace. The river, in the year 1840, cut through the neck of the bend on which this place is situated, and has left it nearly seven miles from the stream.

On the 10th of August, they arrived at the base of the highland upon the summits of which the remains of Black Bird the great Chief of the Omahas repose. "A hill of yellow soft sandstone rises from the river in bluffs of various heights till it ends in a knowl about 300 feet above the water. On the top of this a mound of 12 feet diameter at the base and six feet high is raised over the deceased King, a pole of about six feet high is fixed in the centre, on which we placed a white flag, bordered with red, blue, and white. The Black Bird seems to have been a person of great consideration; for, ever since his death he is supplied with provisions from time to time by the superstitious regard of the Maha's." This celebrated Chief, we learn from other sources, possessed extraordinary mental capacity; but he resorted to the most nefarious practices to obtain the ascendary over his people. He established the reputation of being a wonderful Medicine man, by his cunning, ingenuity, and confidence. To strike the utmost terror into his rivals and enemies, he did not hesitate to resort to the use of arsenic furnished him by the villainy of the Traders. After this wo be to him who dared cross his purposes,—his fate was sealed,—for the fatal potion was sure to be infused into his meat or drink. Many ambitious spirits fell victims to his ferocity. On one occasion only did he manifest symptoms of remorse or penitence. One of his squaws having committed some trifling offence, in a paroxysm of fury, he drew his knife, and stabbed her to the heart. After looking upon her dead body a few moments in silence, the lines of his countenance suddenly betrayed anguished feeling, and he seated himself near it, covered his face with his robe, and remained in one fixed attitude for three days without tasting food or laving his lips with water. His people beseeched him in vain to have pity on them,—he was deaf to all their supplications and remonstrances,—and it was apprehended that he designed putting an end to his existence by starvation. At length a little child was brought into his lodge by its mother. She gently raised the leg of the Chief and placed the neck of the child beneath his foot. This aroused him, and he suddenly arose, harangued his people, and betook himself vigorously to his usual avocations. Black Bird was one of the first victims of the small pox, in 1800. In his old age he became corpulent, and was carried in a palanquin through the villages. Few chiefs have left a more imposing reputation behind them; and still fewer have been so long remembered with awe and gratitude. The flag placed upon his grave by Lewis and Clarke, has been continually renewed to the present day. Mr. Hunt observed it in 1811; and we ascended the eminence and meditated upon the character of him who slept beneath the verdant sod in 1843.

On a beautiful plain near the Calumet bluff, a council was held with the Yankton Sioux. These are one of the tribes of the great Dakeotah

race. The territories of this race then extended from above the mouth of the St. Peters to the Missouri. They are divided into seven tribes and eighteen or twenty clans and bands. They number about 10,000 fighting men—are the strongest tribe west of the Mississippi—and with the exception of some villages on the St. Peters, are strictly Nomadic in their habits. Their dress on gala-days, consists of profusely embroidered shirts, petticoats, and leggings, with moccassins. Usually, however, a blanket or robe, with moccassins, are the only garments of the men, and a petticoat of buckskin or calico, the only garment of the women. Ear and hair trinkets are common to both sexes. After smoking the pipe of peace with these people, the young people exercised their skill with the bow and arrow, for the amusement of their visitors; and at night, as is their custom, dancing and other festivities, were exhibited to honor them. Their musical instruments were a rude tamborine, and a little bag made of buffalo hide, with small shot or pebbles in it, accompanied by five or six singers. A horrid dissonance was kept up for many hours.

In some days they met with a party of the Teton tribe of Sioux, inhabiting the vicinity of the Great Bend---a spot where the river makes a detour of twenty-five miles, leaving only a neck of two miles in width between the upper and lower portion. Some difficulty occurred with these people but the prompt and decisive conduct of Captain Clarke soon brought the Chiefs to their senses. The ensuing day Captains Lewis and Clarke went ashore, and the manner of their reception by these Indians deserves special notice, because it corresponds in the minutest particular to a like reception given to Joutel by the Arkansas's more than a century before.

"They were met on landing, by ten well dressed young men who took them up in a robe highly decorated, and carried them to a large council house, where they were placed on a well dressed buffalo skin by the side of the Grand Chief. The hall or council room was in the shape of three quarters of a circle, covered at the tops and sides with skins, well dressed, and sewed together. Under this shelter sat about seventy men, forming a circle around the Chief, before whom were placed a Spanish flag, and the one we had given them yesterday. This left a vacant circle of about six feet diameter, in which the pipe of peace was raised on two forked sticks about eight inches from the ground; and underneath it the down of the swan was scattered. A large fire in which they were cooking provisions stood near, and in the centre about four hundred pounds of excellent buffalo meat as a present for us. As soon as we were seated, an old man got up, and after approving what we had done, begged us to take pity on their unfortunate situation. To this, we replied with assurances of protection. After he had ceased, the Great Chief rose, and delivered an harangue to the same effect; then with great solemnity, he took some of the most delicate parts of the dog, which was cooked for the festival, and held it to the flag by way of sacrifice; this done, he held up the pipe of peace, and first pointed it towards the heavens, then to the four quarters of the globe; and then to the earth; made a short speech, lighted the pipe, and presented it to us. We smoked, and he again harangued his people, after which the

repast was served up, consisting of the dog, some pemitegon,* and buffalo meat." Dances and other festivities followed of course at night.

Above the Council bluffs, groves of stunted cedar began to make their appearance on some of the heights and the numerous islands, and the forests became more sparse, until long naked stretches of miles would occur. Game abounded in great numbers, large herds of buffalo, elk ank deer, were descried at almost every turn, and the graceful antelope bounded with amazing speed from ridge to ridge, or described magnificent circles upon the adjacent plains.

A village of prairie dogs (*Louisiana Marmot,*) was seen for the first time near the mouth of the *L'eau qui court* river. After digging a depth of six feet to unearth one of these little animals, they run a stick down, and found they had not yet reached half way to the bottom. One of them was finally drowned out, after pouring five barrels of water into his subterraneous abode.

Among the Tetons a strange kind of police and summary justice was observed. A couple of squaws having gotten into a quarrel, a man approached from whom every one ran away terrified. He took the squaws and whipped them severely. Two or three of these officers are found in each village. They are appointed by the Chief, and it is a point of honor with them, to die in preference to disobeying him in any case. They are strictly peace officers, the badge of authority is two or three raven skins, attached to the girdle at the back so that the tails protrude horizontally from the body. Would not such an officer be of service in some of our villages?

In the middle of October, they arrived in the vicinity of the villages of the Mandans, Arricara's, Mimatarees, and other affiliated bands. The origin of the Mandans is not known,—the Arricaras are an off-shoot of the Pawnees driven up the Missouri by wars with the Sioux—and the Minatarees and Upsarokas, or Crows belong philologically to the Dahcotah stock. They are called by our travellers, Fall Indians. They bear a general resemblance to other Indian tribes, differing from the Sioux and some others in the fact that they build villages of dirt houses, and cultivate maize and pulse. Nothing astonished them so much, as Captain Clarke's negro York. They would not believe he was naturally black until they had attempted to wash him. York became so great a favorite, especially with the women, that he was overwhelmed with kindness, and had his hands full of love intrigues. The point of honor with the Arricaras is not that their wives shall be chaste, but that they shall never dispense their favors without the husbands consent. A number of husbands were even solicitous to obtain offspring from York, and vied with each other in attentions to him.

Here the party determined to winter, and near the village of the Mandens, on the north bank, in latitude 41° 21' 47" a fort was built. During the winter they occupied themselves in collecting

*This dish is called *pemmican* or *pemmegan*, by the Hudson's Bay traders and Indians. It is made in several ways Sometimes it is only dried, buffalo meat pounded,—at others, it is mixed with tallow or marrow, in the pounding,—and lastly several sorts of fruit, (as with the Sioux,) such as cherries, plums, gooseberries, currants, buffalo berries, &c., and pounded with grease and meat.

Indian curiosities, the skins and bones of animals, and such seeds and roots as the Indians could procure. They had a cheerful time of it living in great harmony with the Indians,—mingling in their sports and pastimes,—and exchanging the rites of hospitality. Their solitude was cheered too, by several visits of the traders from the British territories, who had well nigh monopolized the trade of the Upper Missouri. In November, a beautiful exhibition of the *Aurora Borealis* occurred; and on the fifteenth of January, a total eclipse of the moon.

With these tribes the punishment of adultery is measured by the power or caprice of the injured party. "One of the wives of the Borgne (a grand chief of the Arricaras,) deserted him in favor of a man who had been her lover before the marriage, and who, after some time left her and she returned to her father's lodge. As soon as he had heard of it he walked there and found her sitting near the fire. Without noticing his wife, he began to smoke with the father, when they were joined by the old men of the village, who, knowing his temper, had followed in hopes of appeasing him. He continued to smoke quietly with them, till rising to return, he took his wife by the hair, led her as far as the door, and with a single stroke of the tomahawk, put her to death, then turning fiercely upon the spectators, he said, that if any of her relations wished to avenge her, they might always find him at his lodge," but the fate of the female, excited no farther controversy. Two stone idols at that time, objects of great veneration with the Arricaras, are explained by the following pretty story. "A young man was deeply enamored with a girl, whose parents refused their consent to the marriage. The youth went out into the fields to mourn his misfortunes, a sympathy of feeling led the lady to the same spot, and the faithful dog would not cease to follow his master. After wandering together and having nothing but grapes to subsist on, they were at last converted into stone, which, beginning at the feet, gradually invaded the nobler parts, leaving nothing unchanged but a bunch of grapes, which the female holds in her hand to this day. Whenever the Arricaras pass these sacred stones they stop to make some offering of dress, to propitiate these deities." Indian mythology abounds in similar beautiful tales.

Having despatched a boat down the river with their collections, and a letter for the President, the party, on the 7th of April, 1805, resumed their voyage in six small canoes and two pirogues, with thirty-two men. Numerous flocks of swan, geese and ducks, covered the river, and they passed large numbers of abandoned Indian encampments. Passing the Yellow Stone, they approached the outskirts of the mountains,—the plains suddenly breaking into knobs and ridges; and on the 27th of May the first view of the great chain opened upon them. In the foreground, the surface rose in a gently ascending lawn, broken at intervals into abrupt cliffs, and opening all around in a rich woodland perspective. This brilliant amphitheatre presented groves of pine and poplar, scattered in every direction, whose openings were enlivened with herds of elk and buffalo,—the former selecting the steeps and upland slopes, the latter the grassy plains. From the west to the northwest stretched a long succession of elevated ridges, and far, far beyond the cold icy peaks, whose summits were crowned

with eternal snow, distinctly marked their pale outlines against the evening sky.

As they advanced, the wonderful and picturesque scenery of the mountains was rapidly revealed to their astonished eyes. Along the shores of the river, walls of soft white sandstone rose perpendicularly up, for miles together. The elements have worked these rocks into a thousand fantastic and beautiful forms, sometimes presenting the appearance of a long street of some ancient city, built up with a succession of columns, arches and architraves,—then the fragmentary ruins of a magnificent building, adorned with pilastres and sculptured spaces,—and then scattered, detached, and confused masses, with solitary domes and minarets, which seem "to mock the ruins they adorn." As they moved on, there seemed to be no end to this enchanting scenery, which presented new and more beautiful aspects at every turn of the river. It was as if seating themselves upon the miraculous carpet of the Arabian tale, they had been instantaneously transported into the region where the genii hold their court, and exercise their supernal powers in the creation of gigantic scenery and gorgeous palaces. Collonades, towers, domes, fortifications, cupolas, minarets, castles and villas, rose up in rapid succession, whilst smiling and flowery plains, deep forests, frowning mountains, and the solemn and melancholy music of flowing waters, hold the mind entranced for hours and days together.

On the 13th of June they approached the *Great Falls* of the Missouri. The river is here, three hundred yards in width. For many miles, the hoarse roaring of the rushing, boiling and tumbling water may be heard; and, as the morning sun pours his mellow light upon them, the curving and leaping fluid refracts the beams into myriads of capricious and changing figures, and the uprising mist is penciled into a succession of magnificent rainbows, which span the broad stream, and tremble with intense and flickering brilliancy. These great falls consist of a long succession of rapids and perpendicular descents. The first of these is thirty feet descent; the second, twenty-six feet five inches; the third, nine feet six inches; the fourth, four feet; the the fifth, three feet; the sixth, three feet; the seventh, two feet; the eighth, fourteen feet seven inches; the ninth, forty-seven feet eight inches, the tenth, nineteen feet; the eleventh, five feet; the twelfth, sixteen feet; the thirteenth, three feet; the fourteenth, three feet six inches; the fifteenth, three feet; the sixteenth, six feet; the seventeenth, three feet; the eighteenth, two feet; the nineteenth, thirteen feet; the twentieth, eighty-seven feet four inches; the twenty-first, six feet; the twenty-second, four feet; the twenty-third, thirteen feet; the twenty-fourth, eighteen feet; the twenty-fifth, six feet; the twenty-sixth, ten feet; the twenty-seventh, eight feet; and the descent of the whole, two hundred and sixty-five feet eight inches.

Making a portage of their canoes and baggage, by means of a rude truck-wheel wagon constructed for the purpose, the party resumed their voyage, almost enclosed on all sides by majestic ranges of mountains, the slopes of which were enveloped in shrubs and trees, and their rough ridges presenting an aspect of desolation. The air was chilled,—the water, through which they were often compelled to wade, towing or pushing their canoes, was intensely cold, and they were

surrounded at night by large numbers of grizzly bear, the fiercest, the most vivacious, and most powerful animal of the continent. Sometimes, torrents of rain, which seemed to be poured out in one mass, filled the valleys and ravines with a sudden and dangerous inundation; at others, a dense sheet of clouds would be expanded as if by magic, over their heads, and shower down successively or in conjunction—torrents of rain and hail, accompanied with vivid flashes of electric fluid, and thunder which shook the mountains to their deep foundations. A phenomenon which has since attracted the attention of all who have visited these enormous piles of primitive rock, astonished and excited the curiosity of the travelers,—This was an explosion, sometimes a single one, at others, five or six in succession, resembling the booming of distant ordnance. This phenomenon has been observed in northern Europe, and in the Andes. In the former country it has been attributed to the bursting of rocks occasioned by congealing waters in their crevices; in the latter, the Jesuits attributed it to the bursting of a small pudding-stone, in which a collection of rich jewels are deposited. Humboldt conjectures that it may be caused "by a disengagement of hydrogen produced by a bed of coal in a state of inflammation." The voyageurs of Lewis and Clarke were sure it was occasioned by the bursting of the rich mines of silver within the mountains. Perhaps, after all, the solution given us by a Crow Indian was as rational as any of these guesses: he said it resulted from the violent efforts of the evil spirits,—whom the Great Spirit had imprisoned in the bowels of the mountains, for their villainy to the red men,—to regain their freedom.

In some days, they ascended to the foot of the *Gate of the Missouri.* For five and three-quarter miles the river flows between walls of rock, elevated perpendicularly from its surface to the height of twelve hundred feet. It is obvious that it has burst its way through this immense barrier; for the trophies of its victory are confusedly scattered for several hundred yards below the outlet of the chasm. The weather-beaten masses of rock, the moaning sounds of the waters, the flashing streamlets which jet from the sombre walls, and the frowning mountains, and overhanging cliffs which encircle the perspective, concur to present a scene of intense interest and grandeur. Just below the falls, and at White Bear island, above them, the party had made *Caches,** in which maps, charts, notes, and most of the heavy baggage was deposited as a resource upon their return. Leaving the *Gate*, the party moved on to the three forks, to which they gave the names of Jefferson, Madison, and Gallatin. Ascending the Jefferson as the main branch, they reached its source on the 12th of August, after undergoing hardships, fatigues, dangers and difficulties, which are inconceivable to those who have never experienced similar things. "They had now," says the Journal, "reached the hidden sources of that river, which had never before been seen by civilized men;—and, as they

*This is a Canadian-French word, signifying a hiding place. The Indians are the inventors of the practice. A *Cache* is made by digging a round hole some feet deep, and surrounding the interior with sticks, leaves, and light brush. On these, the goods are deposited and covered successively with twigs and dirt, and the whole carefully closed on the surface, to correspond with the adjacent surface. In this way, Lewis and Clarke made several *Caches*. Trapper and hunter, as well as Indians, constantly use these hiding places.

quenched their thirst at the chaste and icy fountain,—as the stay down by the brink of that little rivulet, which yielded its distant and modest tribute to the parent ocean, they felt themselves rewarded for all their labors and all their difficulties."

Ascending to the summit of the ridge, from the slope of which the mighty river has its birth-place, their eyes rested alternately upon the scenery towards the rising and the setting sun. Turning to the east, imagination followed the tiny rivulet which they had just left, through broken and jagged cliffs, and verdant vallies,—until swelling into a mighty river, it pours its fertilizing waves through thousands of miles of expanded plains teeming with rich grasses, and beautified with flashing flowers; turning to the west, the eye was attracted by a long succession of rugged mountains, and the imagination was strained to conceive what wonders could be hidden beyond their snow-crowned ridges and pyramidal peaks. The extreme navigable point of the Missouri river, was found to be in latitude 43 deg. 36 min. 43 seconds. Swarms of rattlesnakes were found along Jefferson river, and many signs of beaver, from their entrance into the mountains.

Their dams and houses were strung along all the streams, presenting frequently serious impediments to navigation. Grizzly and black bear, buffaloes, elk, goats and deer abounded, and it required no small care and caution to avoid the attacks of the first named animals. Indeed, many encounters, some of them of quite a serious character, occurred between these animals and several individuals of the party. One evening the hands in the hindmost canoe noticed one of them lying in an open space, about three hundred yards from the river, and six of the men, all crack hunters, went ashore to attack him. By creeping up behind a small eminence, they succeeded in approaching within forty paces unperceived. Four of them fired, and each lodged a ball in his body, two of which passed directly through his lungs. He sprang up infuriated and made towards them. The two hunters who had reserved their fire, complimented him with two more balls in his body, one of which broke his shoulder blade, and checked his onset. Before they could reload, he pressed them so close that they were compelled to run towards the river, and before they arrived there the bear had nearly overtaken them. Two of them jumped into the canoe, the four remaining instantly separated, and concealing themselves among the willows, fired as fast as they could load. The bear was struck several times more, but the additional wounds only served to aggravate his fury, and direct his attention to the party who last fired. At length he pursued them so closely, that they threw away their guns, and pouches, and sprang from a perpendicular precipice twenty feet high into the river. The bear sprang after them, and was very near one of them, when one of those on shore fired, and fortunately the ball passed through the head and killed him. On examination they found that no less than eight balls had passed through his body. On another occasion they met with an enormous bear of this species. When fired upon he did not attempt to attack, but fled with a tremendous roar of pain. Such was his tenacity of life, that after five balls had passed through his lungs, and five other wounds were inflicted, he swam more than half across the river to a sand-bar, and survived over twenty minutes. This one weighed five or six

hundred pounds, and measured eighth feet seven inches from the nose to the extremities of the hind feet, and five feet ten inches around the breast.

Captain Lewis had preceded the party with the hope of meeting the Shoshonees,—a tribe which has migrated from the sources of the Saskatchawan, to those of the Lewis river, and bands of whom are scattered as low down as the Kooskoosie. and as far west as the interior of the Great Basin of California. After being baffled several times by the timidity and suspicion of these people, the Captain was at length successful. He found their traits analagous to the tribes on the Missouri. Their accounts of the country westward were very discouraging. The provisions of the travelers were nearly exhausted, the game became much scarcer as they proceeded westward, and the Indians by whom they were surrounded were nearly in a famishing condition. No buffaloes roamed west of the mountains, antelope and deer were scarce, and an occasional salmon from the streams furnished by the Indians, or caught by the men, was nearly their sole support. On one occasion a hunter fortunately killed an antelope: a few moments after the entrails were removed, some of the Indians arrived, "and ran tumbling over each other like famished dogs, each tore away with whatever part he could, and instantly began to eat it, and no part which we are accustomed to look at with disgust escaped them." In this fearful extremity Captain Clarke examined the stream near which they were encamped, and to which the name of Captain Lewis was given to ascertain whether it was possible to descend it. In some days he found a line of stupendous mountains, stretching from north to south across the stream at right angles, through which it had burst its way and rushed for hundreds of yards through a narrow chasm, filled with jutting rocks, with a perpendicular wall of rock rising from the surface to the height of two thousand feet. Ascending the mountain on foot, he beheld a succession of these chasms, flanked by enormous piles of rugged rocks. The navigation was obviously impossible.

Rejoining Captain Lewis, they succeeded in purchasing twenty-two horses of the Indians, and resumed their journey. Proceeding some distance down the north fork of Lewis river, they turned northward across Bary, and up Fish Creek, and after literally cutting their way through thickets of vines and thorny plants, and laboring over angular fragments of rock, and around cliffs, and across chasms, and suffering appalling annoyances, they ascended the dividing ridge between the waters of the Lewis and Clarke rivers, and beheld a scene unparagoned in grandeur and sublimity.

On either side, beautiful and fertile vallies penetrated between the mountain ranges filled with an exuberant growth of grapes, shrubs and flowers. Raising their eyes from these delicious spots, they rested upon dark rich masses of interlaced vines and undergrowth along the bases of the mountains; —upon enormous pines, with their stiff, angular branches, and sombre hues, forming a dense stripe midway to the summit;—and upon interminable ridges and solitary peaks wrapped in a winding-sheet of snow. What a succession of brilliant lights and deep shadows;—of quiet and glassy lakes, and purling riv-

ulets, and leaping cascades, hallowed in rainbow hues;—of gentle and waving plains, and abrupt and towering mountains!

Descending into the valley, they followed the windings of several little brooks, which led them to the great middle fork of the Columbia, to which the name of Capt. Clarke was given. Here they met with the Cotlashoots, a sept of a large tribe who have emigrated from the north, along the western spurs of the mountains, and now inhabit the upper tributaries of the Columbia, called Tushepaws. These people were rather fairer than the tribes previously visited: dressed in skins, and exhibiting evidences of uncommon activity and strength. Learning from them a direct route to the main Columbia,—after exchanging with them for fresh horses, to take the place of those injured in passing the rugged cliffs, and purchasing some more,—the party proceeded. Descending the Clarke some distance, they struck Travelers-rest Creek, a small stream coming in from the west, which they ascended, upon an old Indian trail, and again encountered the grand dividing ridge between the waters of the Lewis and Clarke rivers. So great were the impediments to their progress—consisting of piles of pointed rock tumbled in confusion from the mountain heights,—of large numbers of fallen trees,—of interlaced shrubbery and vines, and icy ravines and streams—that several of the horses were lost, and a number of the men well-nigh overwhelmed in despair. To add to their terrors, the game was exhausted: they were forced to subsist upon horse-flesh, and they could see nothing in the future which promised any alleviation of their sufferings. The shrill cry of the panther, and the mournful howl of the wolf, seemed omens of their fate. The imagination can conceive nothing more appalling than the scenes which presented themselves here. Livid gashes of ravines, dark deep gorges, giant precipices, rugged and desolate ridges, fearful, and apparently bottomless chasms, long, sloping and narrow paths, which must be passed over, and boisterous and boiling waters, all combine to impress the mind with images of power and terror. At one moment the eye rests upon rich and russet hues of waving slopes and fragrant oases,—and in the next, the senses were stunned by commingling sounds of moaning trees, murmuring rills, rushing cascades, tumbling rocks, and roaring torrents.

Even in the middle of August, ice was formed in the night, and about the 10th of September the snow began to fall. For twelve days the party dragged their weary limbs over rugged cliffs, across deep gorges, around fearful precipices, and over stupendous ridges clothed in perpetual snow, with no food but horse-flesh, and no definite idea of the region through which they moved, or the fate which awaited them. At length, they descended into the valley of the Kooskoosie, a tributary of Lewis river, where another scene of surpassing beauty opened upon them. In front of them expanded a long and fertile valley, garnished with rich grass, and delightfully contrasted shrubs and flowers,—whilst on all sides, a long succession of hills, ridges, and pointed peaks, rose majestically upward, until their distant outlines seemed mingled with the clouds. Golden, silvery, and purple clouds, rested their feathery folds upon them, and from the summits of the interior ranges, numberless streams poured their limpid water, —now glancing like silvery serpents down the russet slopes,—now

leaping in brilliant curves from the rocky ledges—and now pouring a snow-white sheet over solitary precipices;—until entering the beds of flowers in the valley they wound and lingered through, their rippling currents giving forth gentle and musical sounds.

In this lovely valley, they met a village of Chopunnish or Pierced-nose Indians, a clan related to the Tushepaws. Being informed that the "TWISTED-HAIR," their great Chief, was below spearing salmon, they proceeded to his encampment where they were received with kindness and hospitality. From a map which he drew for them on an antelope skin, they obtained a very good notion of western geography. Leaving their horses in the care of this Chief, and making another cache, they commenced the descent of the Kooskoosie in five canoes, and in sixty miles reached its mouth, passing over forty-four rapids and a number of shoals, at some of which portages were made of boats and cargoes. Thence to the mouth of Lewis river, some falls and twenty-three rapids were passed, many of them dangerous. At its mouth Lewis river is five hundred and seventy-five yards in width, and the Columbia, nine hundred and sixty yards. The country for many miles around their junction is an arid plain, where other vegetation than several species of cacti and frosty-leaved artemisia refuses to germinate. All the rapids of these streams are fishing places for the various bands of Indians who frequent their banks. The fish are mostly speared, but sometimes they are caught in wire or wicker work of shrubs, stretched from bank to bank. The rude residences of the Indians, built of logs, brush, skin and slabs, may be seen near them, and in the vicinity, the burial places of the dead who are wrapped in skins, deposited in the earth, and the spot marked by slabs of wood.

At the junction, the Sokulks, another clan of the Tushepaws were found, their traits corresponding to their origin. The sweating baths of the Indians of Oregon differ from those east of the mountains. They are built of clay, rectangular and closely covered in. The Indians enter them with hot rocks and water, and when the aperture is closed the water is poured upon the rocks until sufficient steam is generated to answer the purpose. Not unfrequently they rush from these steam baths and plunge into a stream of icy coldness.

As they descended Lewis river, excursions were made along its banks. In one of these, Captain Clarke shot a large white crane. The strange noise attracted the attention of some Indians, who, getting a glimpse of the falling bird, and afterwards seeing him approach, could with difficulty be persuaded that he had not descended from the skies. Such is the influence of ignorance and fear. On an island in the river, they examined a very singular Indian cemetery, the first of a large number of similar structures scattered along the stream. "This place in which the dead were deposited, was about sixty feet long and twelve feet wide, and was formed by fixing in the ground poles, with forks six feet high, across which a long pole was extended the whole length of the structure. Against this ridge pole were placed broad boards, and pieces of canoes in a slanting direction so as to form a shed. It stood east and west, and neither of the extremities was closed. On entering the western end we observed a number of bodies, wrapped carefully in leathern robes, arranged in rows on

boards, and covered with a mat. This was the part destined for those recently deceased, while a little farther on, there were bones half decayed and scattered about, and in the centre of the building there was a large pile of them heaped promiscuously upon each other. At the eastern extremity was a mat, on which were placed twenty-one sculls in a circular form; the mode of interment being first to wrap the body in robes, and as it decays the bones are thrown into a heap and the sculls placed together. On the inside were suspended fishing nets, baskets, wooden-bowls, robes, skins and trinkets, obviously intended as offerings of affection to deceased relatives. On the outside were the skeletons of several horses, and great quantities of their bones, sacrificed no doubt at the funeral of their owners."

As they floated onward novel and picturesque scenery opened upon them. Far to the west the elevated peak of Mount St. Helens, with its diadem of snow, pierced the deep azure of the skies, and yet farther northward the long blue line of the Cascade range, extended until they melted into the distant horizon. From the outlet of Lewis river about one dozen rapids were passed, and the channel was much obstructed by rocks. On the 22d of October, they reached the head of the *Great Falls.*

Here the river is separated into a number of channels by islands of black rock, the southern shore is lined with precipitous cliffs up to the waters edge, the northern expands into a desolate plain. The largest of these islands (a mass of rock) is near the centre of the stream. Between this island and the northern shore, there are three narrow crooked channels too impetuous to be passed in canoes. And again, at the head of the large island the southern channel is split by another island of some size, at the head of which there is a group of isolated rocks. The channel between these two islands is narrow. and rushes madly through, tossed into foam by the rocks in its bed. The channel between the upper island and the southern bank has a perpendicular fall of twenty feet near the head of the island, and at the lower point of the large island the united southern channels pass over a rapid of eight feet descent. The whole of the fall is thirty-seven feet eight inches descent. Around this fall a portage of 1200 yards was made by our travelers. One-third of this distance was over a solid rock, two hundred yards more of loose deep sand, and the remainder over hard firm ground. From the *Great Falls* to the *Little Dalles*,* is a distance of near three miles of very rapid water. These narrows are occasioned by a high black rock which juts nearly across the channel from the north, leaving only a space of forty yards between it and a similar mass of rocks on the south bank. Through these narrows a distance of half a mile, the travelers passed in their canoes with great hazard, and to the astonishment of the Indians, for the channel was whirling, swelling, and boiling in every direction.

One mile and a half below the *Little Dalles*, a very bad rapid occasioned by immense rocks in the midst of the river, compelled them to make another portage. At the end of two miles more they

*The word *Dalles* is of Canadian origin, and means literally a trough. It is applied by the voyageurs to places where the rivers run through narrow chasms of rock. The Spanish term *Canone* is nearly its synonyme. The latter, however, is usually extended to deep cuts of streams through clay or sand.

approached the *Great Dalles*. At this place, the river is compressed between high black rocks for a space exceeding three miles, the whole width of the channel being from fifty to one-hundred yards. Throughout the whole distance the water swells, boils and whirls in a fearful manner, and the party made a portage of the goods, and let the canoes down with the aid of ropes held by the voyagers along the summit of the rocks. The whole distance from the head of the *Great Falls* to the foot of the *Great Dallas* is about ten miles, and the whole descent of the river about seventy feet.

At the *Great Falls* then resided the Eneeshurs, the last tribe connected with those near the forks of the Columbia. At that time some tribes above the falls had adopted the practice of compressing the heads of *female* children into a square form, those below with whom this custom originated, include both sexes. There is no philological affinity between the tribes above and below the Falls, and they are contrasted in habits and superstitions. The lower tribes appear to have migrated from the north, following the line of the coast, and our travelers traced all the dialects to a common root. Near the falls the first regular constructed houses they had met with west of the Mississippi, were observed. Occasional vessels had supplied them with implements by trade. Their houses were usually constructed by digging a square hole six feet in depth, surrounded on the interior by palisades, with a ridge-pole from end to end, and a roof of poles, sticks and boards. In the interior were many carved images of animals and men, but these were not the objects of adoration. The staple of their diet is fish variegated with some dogs and a few berries. Their canoes are of white cedar or pine, very light, broad in the middle, and tapering towards the ends, with the extremities elevated and ornamented with carvings of the heads of animals. They manage them with great skill and dexterity. Above the falls myriads of salmon crowd the streams in the spring and summer, but few of any other species are found;—but below, the salmon, trout and several other species collect. At the falls, sea otters were seen for the first time, and in great numbers.

Nothing was more astonishing than the gigantic forest trees west of the mountains. This great chain separates the continent into two almost distinct vegetable empires. Oaks, juglandes, elm—Magnolias and rhododendrons form the striking peculiarities of the eastern slope of the range; on the western only, one species of oak is found,—one of the rhododendron,—but eight varieties of pine, with cedar, white birch, and other smaller trees. Of the large trees, the gigantic *pinus Lambertiana* (Lambert's pine), is the most extraordinary. It attains a height of from one hundred and fifty to more than two hundred and fifty feet, varying from twenty to sixty feet in circumference, far surpassing

"The tallest pine
"Hewn on Norwegian hills to be the mast
"Of some great Admiral."

Mr. Douglas counted *nine hundred* annual rings in one of these trees.

In some days, the party reached the *Great Shoot* or *cascades*, passing in their descent, a number of Indian villages, and the fertile and timbered valley of the Wallamutte. The mighty mass of waters has here cut its way through a chain of towering, volcanic mountains,

rushing with resistless impetuosity over rocky reefs and dislocated cliffs, for three or four miles. On both sides of the furious waters, perpendicular battlements of rock rise majestically up, hundreds of feet, from the surfaces of which, a thousand rills, rivulets, and spouting springs issue forth, rippling, leaping, curving and dashing; now expanding into flashing sheets, then springing into pellucid cascades, and again, striking jutting rocks, and exploding in sparkling clouds of mist; whilst a dreamy, unearthly and marvellous succession of soft, mellow, and brilliant hues wave over and around the whole. A portage of two miles, in descending, and three in ascending the river, is here usually indispensable. Below the cascades, groups of Indian huts, and burial vaults appeared, and flocks of swan, geese, ducks, brant and sea-gulls, floated over the quiet waters. Deer and elk too, became abundant.

On the 7th day of November, after eighteen months of toil, exposure, dangers, and privations, their eyes opened, for the first time, on the boundless expanse of the Pacific Ocean. As busy memory arrayed for their contemplation the thousand hazards they had passed through, and wonderful escapes they had made from the ferocity of beasts, and the fury of the savage—as their imaginations followed the shores of the great Ocean, until it pictured to them the broad countries which it watered, and the thronging millions who dwelt upon its distant shores,—as they meditated upon the wide space which separated them far from the comforts and security of civilization—and as they anticipated the weary journey yet before them, and thought of the treacherous, cruel, and vindictive character of the hordes which surrounded them, the hearts of the way-worn pilgrims were filled with sadness. But soon they thought with profound gratitude of that great and good Being who had "held them as in the hollow of his hand" when threatened with swift destruction; and of the immortal fame to which their names should be consecrated in after times.

ART. III.—RAILWAY ON THE NORTH SIDE OF THE MISSOURI RIVER.

We are pleased to learn that the recent movement in St. Louis, in respect to the Pacific railway, has awakened our citizens on the north side of the Missouri river, to the subject of internal improvements. The facts and arguments contained in the following communication are worthy of consideration; but our information in respect to the probable cost of the route on either side of the river is too vague at present, to authorise any conclusion upon that point. The Pacific railway company have no right to locate their road on the north side of the river; yet, it may be good policy to cause a survey of that route to be made before the meeting of the next General Assembly. And, if it should be found that the northern route is the cheapest; or even as cheap as the southern, its survey would stimulate the friends

of the respective routes to subscribe for stock; and, consequently, be the means of more certainly securing the construction of the road. But a line of railway on both sides of the Missouri river is necessary as main trunks of a system of railway improvements in our State; for a road on one side can afford but little benefit to the other. With these two lines completed, the one throwing off its branches in the direction of Arkansas and Texas, and the other in the direction of Iowa, we shall have laid the foundation of a system that may be extended almost indefinitely. And, we ask, can not this be done? If the people south of the river can construct a road, why may not those on the north construct one also? We believe those of the north possess more wealth, and quite as much enterprise. With a liberal donation of land from the General Government, which, we believe would be granted, and a manly effort on the part of the people, the work could be accomplished in a few years, and, the wealth of the country greatly increased.

In connection with this subject we beg to suggest to the people on both sides of the Missouri, whether it would not be well to call county meetings, and get up petitions to Congress for a donation of lands in aid of the work? We understand that the directors have forwarded a petition; but, a movement on the part of the people would, we think, add weight to their application, and make our delegation in Congress more active and vigilent. We do not know, certainly, how much land the Directors have asked for; but we are of opinion that when the objects of the work, and, the quantity of public lands in Missouri are properly considered, it is not unreasonable to ask for 1,000,000 acres. And we believe that a grant of this quantity can be obtained with as much certainty as a less amount. EDITORS.

To the Editors of the Western Journal.

In regard to the Pacific Railroad from the city of Saint Louis westward, much has been said and written; and locations minutely traced out, in the closet of the engineer and politician, from beginning to end. These closet Legislative locations of railroads will not always hold good, and should only be appreciated in proportion as they may tend to throw light on the subject, and hold up to the view of the country, the company and the engineer corps the facilities to be gained on the variousr outes proposed—so that the most conspicuous may undergo a reconnoissance, and if worthy of it, an instrumental survey, to determine definitely its merits.

In a great work like this, it is well that all who have correct ideas, or knowledge bearing upon the subject, and which may prove useful, should speak out boldly; and it is with this view that it is proposed to take a short survey of the routes on the north and south side of the Missouri river, and the arguments advanced in favor of each, without attempting to prejudice popular feeling either way. Engineers, in the surveys, locations and construction of railroads, deal entirely with facts.

In the outset, we will lay it down as an axiom, that capital, combined with American genius and enterprise, is equal to the task of constructing a good road over, under, or through any country we have this side of the Rocky Mountains: but, at the same time, when there is a choice, the best route should be adopted.

In the first place, we will remark that, it has been well and truly said of "The southern slope of the main or Ozark Ridge, as he approaches its eastern terminus, to the geologist, becomes strikingly interesting; and having reached the waters of Currant river, he is involved among hills, knobs and mountains—the topographer has no business there." This remark will apply to the whole Merrimac country, and extends up to the very summits of the rock cliffs, whose bases are washed by the southern shore of the Missouri river. But topography is a part of our vocation, and we would say that for making lively and beautiful sketches on the page of the note book—it is the country—but no place for railroads, if a better can be found which will accommodate the same trade.

In the minds of many, the southern bank of the Missouri river, from Bonum bottom to the Lamine, has been fixed upon, ahead of all surveys. A few reflections on this subject may lead us to examine some other route; and then, all things considered, of the two, choose the most favorable.

It must be borne in mind that the Missouri river is subject to great overflows, and, in passing up its southern bank, the road bed must be placed sufficiently above high water mark to be beyond the reach of floods. This will, at once, lead to a continuous series of heavy cuts and fills, the most of which must be rock excavation, varying in depth from five to perhaps over one hundred feet. Then, again, the embankments will often require to be faced with rock or stone walls, in order to secure them from being washed away by floods. Every little drain or rivulet—almost every indenture in the cliffs—will require a stone culvert, of greater or less dimensions; which, altogether, with the bridges, will constitute a large item in the endless expenses of keeping the road in repair. Besides all this, to Jefferson city, you pass not through a country, but alongside of a barren region which feeds nor yields scarcely man or beast. And, upon arriving at the western boundary of the State, in (Van Buren) Cass county, you are twenty-three miles south of the Missouri river, and thirty-six, or forty miles out of the direct route, with the Kansas river ahead, and to be bridged before reaching the divide between Blue river and Big Nimehaw—thence to the Platte region.

Again, this route crosses streams which drain a larger area of country than would be by a line on the north side of the river: for this is what we are after, a comparison of the northern with the southern route.

It is estimated to require on the south side, upwards of three thousand feet in length of bridging! with Kansas river not reached, and to say nothing of the hundreds of stone culverts.

Now, we will suppose the route to St. Charles common to the routes on each side of the river. We there cross, and striking the slopes of the hills, soon rise by a gradual ascent to the top of a beautiful broad ridge, and continue along the same, passing between

Dardenne and Femmeosage Creeks, through Howell and Thornhill's Prairies, to Hickory Grove; Warrenton, and between the head waters of Charrette and Eagle Fork of Cuivre, to Pendleton, in Warren county, and Lewestón and Danville in Montgomery county. Pursue the same divide between the head waters of Laoutre Creek and Cuivre river, leaving Locust Grove in, Audrain county to the south—or cross Loutre at Danville, passing Centreville, in Calloway county, and on to the ridge in Audrain, as before. Thence, leaving Cedar and Rochepercee Creeks to the south, and the south fork of Salt river to the north, pass through the corners of Boone and Monroe counties, to Smithland, in Randolph, and Roanoke, on the northern line of Howard county—crossing East Chariton south of the middle fork, and Main Chariton, south of Ketesville, in Chariton county;—cross Palmer's Creek, and on to Brunswick, near the mouth of Grand river, crossing this river near its confluence with the Missouri, thence continue up the Missouri river—or, if practicable, by Pleasant Park and Manlius, to Carrolton, on Waconda Creek, in Carroll county—with the Waconda, or some tributary across to Crooked river, and Richmond, in Ray county, or, crossing north of Richmond, take the west fork of Crooked river, cross Fishing Creek below the east fork, and north of Liberty, in Clay county, near Barry, to some point on the Missouri river, between the mouths of the Kansas and Platte, at or near Parkville—or, from Grande river take the divide by the lead mines, between Big and Waconda Creeks, thence across Platte river and Bee Creek, to Weston, in Platte county—and on to the Plains. This route passes from five to thirty miles north of the Missouri river, and through the most fertile portion of the State.

Having traced our route on the northern side, to the western boundary of the State, let us compare notes awhile. We find that the north side is comparatively a straight line, only occasional light curves and comparatively light grading—the excavation composed almost entirely of earth. That each line will admit of easy grades; and that the southern route, from the fact of having to adhere to the range of the Bluffs, must, where their direction changes abruptly, encounter heavy curves, excavation or embankment, or perhaps all three combined. And this excavation in the main, rock work, which will cost on an average, as compared with earth, from three to five times as much per cubic yard. The length of the southern route about two hundred and sixty one miles and the northern two hundred and fifty-two miles.

From St. Charles to Chariton is one hundred and thirty miles, with not a stream to cross—not a bridge to build! and only occasionally a culvert when crossing the head of breaks in the ridge which may be necessary to form ponds in order to obtain a supply of water for the locomotives. Besides, on the south the track running along the northern base of the cliffs will be much more liable to bank up with snow, than that on the beautful upland prairies of the north side.

In Vol. 2d No. 5, page 297 of the Western Journal, and to which we would direct the attention of the reader; it is said that a much greater amount of water is received into the Missouri river from the north than from the south side. Directly the reverse of this assertion

appears to be the fact. The whole area drained into the Missouri river on the south side is equal to 19,850 square miles.

On the north side, from the city of St. Charles to Chariton river is 2100 square miles. The country from Chariton to Platte river, including the tributaries of these streams to the northern boundary of the State, is equal to 12,960 square miles. From where the northern boundary line leaves the Desmoine river, west to Platte and including the head and tributaries of this stream, as also of Grand and Chariton rivers, in the State of Iowa, is equal to 3,500 square miles. Making in all on the north side, so far as the road is concerned, 18,560 square miles, against 19,850 on the south side. But a fair estimate on the north side would be to deduct the area from St. Charles to Chariton, as all of those streams are headed; this would leave the total area on the north side 16,460 square miles, against 18,850, a difference in favor of the north side, so far as our road is concerned, of 3,390 square miles of surface drained.

So far from the whole north half of the State being drained into the Missouri river, there is Cuivre and many other small streams, together with Salt river, which head in Iowa, and is partly included in our estimate for that State—all flowing into the Mississippi river and draining an area of 6,430 square miles.

Again, to the western boundary of the State, by the two routes the north is about ten miles the shortest; and to a point, common to both routes, on the divide between Wolf and Blue rivers, west of St. Joseph, the northern route is thirty-six miles the shortest. Well, now let us take the route to St. Charles as common to both sides. From St. Charles to Chariton, one hundred and thirty miles, will cost at least $5,000 per mile less than the same distance on the south side; this is equal to $650,000; to which add for thirty-six miles greater distance on the south side, at $25,000 per mile $900,000 and we have the round sum of $1,550,000 saved by the northern route.

In speaking of light or gentle curves on the two routes, it is understood the radius of curvature must not be less than from three to five thousand feet in length.

The grade is an imaginary line drawn through the hills and across the hollows in the direction of the roadway, and is either level or inclined; when the hills shall have been cut down and the hollows filled up to this line, the grading is said to be complete. Strictly speaking, all inclined grades are "Inclined Plains," but in the general acceptation of the term, are only called inclined plains when the rate of inclination is so great that a locomotive with its train cannot ascend without the aid of stationary power. With this explanation of inclined plains, it is believed that none will be required on either route from St. Louis to the South Pass.

In the summer of 1837, a steam engine built by Mr. Norris, at Bush Hill, left Columbia with a train of thirty-six cars—the total load being 172 tons—and proceeded to Philadelphia, a distance of eighty-two miles in eight hours—weight of engine nine tons. With this great load it passed up the "Gap grade" of forty-nine feet rise per mile, at the rate of ten miles per hour. On a grade of thirty-two feet per mile, for nine successive miles, a speed of twenty-five miles per hour could have been attained. On this road, are some short curves.

These facts offer great encouragement to persevere in the construction of railroads; but are no argument in favor of high grades and short curves, when the nature or topography of the country will admit of their being avoided.

On the line of our route, as sketched out, and adjacent thereto, is an abundance of fine coal. At Camp Branch, near Danville, it is so abundant and easily mined that it is proposed to deliver it at the pit for one cent per bushel. In Calloway county, coal of a fine quality is abundant, and in seams ranging from nine to twelve feet in thickness.

With a good railroad through such a country, coal from Camp Branch, in Montgomery county, could be delivered in St. Louis at as low a price as it can now be obtained from the mines within six miles of that city. To Camp Branch is about seventy miles, and at the rate of one cent and fifty-four hundredths per ton, per mile, which is about the rate charged on the Baltimore and Ohio Railroad, the transportation would cost less than four cents per bushel.

The north side is essentially an agricultural country, famed for its grain, hemp, tobacco, and stock, and must soon have some outlet other than the Missouri river. Would St. Louis retain this trade? if so, it must be accomplished by the construction of proper roads. The north side looks to Saint Louis as the natural depot for its surplus productions. Shall she in vain look for aid from this quarter?

The time is passing, if not already gone, when the citizens of Saint Louis can rest with folded arms, and grow rich upon her natural resources; if she does not bestir herself, the sceptre will depart from her. Already are our neighbors to the east looking to the immense surplus productions of northern Missouri; and you might as well try to confine a powder magazine after the match has been applied, as attempt to coop up Yankee skill and enterprise. This trade, if not secured, will depart and much of it pass by way of the Lakes to New York.

We are of that school whose faith is strong: we believe the greater the number of judicious and substantial improvements made in a city or State, the better able will that community be to originate and prosecute successfully, other improvements: and, now, if you will, let the North, the South, and the Centre, have their railroads terminateing at St. Louis.

We are naturally inclined to favor self-interest in carrying out public as well as private improvements; and has not this feeling operated in drawing the location of the Pacific railroad through the knobs of (Van Buren) Cass county, with a view to its being intersected by the great Independence and Missouri river—or White river railroad? And will this intersection be a sufficient inducement to draw our main trunk thirty-six miles out of the true direction?

Judging by the description which travelers give, from Fort Leavenworth between Big Nimehaw and Blue rivers, thence to the Platte, no country offers greater facilities for the construction of railroads, so far as relates to light curves, lengthy tangents and easy grades.

Col L. E. Powell, who commanded the United States troops in the Platte country during the Mexican war, states that from old Fort Kearney on the Missouri river, to the south fork of the Platte is two hundred and ten miles; that its banks never overflow; and in all

this distance but two tributaries, of any size, put in on the south side. The first is the Saline, fifty miles above its mouth, which is only sixty feet wide. The next, fifteen miles farther up, is a small creek only eight feet wide, and thus it would appear that this country is admirably adapted to the location of railroads.

Should this article have any effect to stir up an inquiry into, and an examination of the most feasible routes for the location and construction of the St. Louis trunk of the Pacific railroad, it will be ample remuneration for the labor bestowed—be the route through our State either to the north, or to the south side of the Missouri river.

ART. IV.—NEW MADRID, MISSOURI.

To the Editors of the Western Journal:

I have thought that a few incidents of the history of one of the early Spanish settlements, on the western shores of the Mississippi, would not be devoid of interest to the many readers of your Journal, particularly Missourians: you will, if the following meets with your approval, give it a place in the columns of the Western Journal.

It appears to have been the policy of both the Spanish and French Governments; to extend the area of their possessions, by the establishment of villages, towns, forts and other public establishments; leaving the settlement of the wide spread forests, to the future emigrant or pioneer: a town could not be established, a settlement made, unless the projectors were clothed with certain powers of government.

The commandants, exercised considerable regal power, they possessed not only military, but civil and judicial authority, over the inhabitants: to them were intrusted the regulations of trade and commerce, with their American neighbors, and the numerous Indian tribes; the dispossl of the soil by grants, concessions, etc: subject only to the confirmation of the Vice Roy of the King. Whenever it was deemed of interest to His Majesty to make a new settlement or colony; a competent person was selected to explore the uninhabited part of the domain; and make a selection for the site of a new village, town, or military post: then came the appointment of a commandant, clothed with all necessary power, to administer the affairs of government of the new colony—around these nuclei of civilization, soon sprung up a thriving population.

The lapse of time has proven the sagacity and forethought of the early pioneers of New Spain, in the valley of the Mississippi; as there is scarcely a village or town founded by them, that does not, to this day, possess many natural advantages for trade, commerce and industrial pursuits, over all other points, on the banks of the great Mississippi. The ancient town or Post of New Madrid was established some time in the latter part of 1788, or, of the first of 1789 by one Jacque Clamorgan, a Scottish adventurer; who at that time held some post under the Spanish government. He received the authority to make the establishment from Gen. O'Riley, Lieutenant

General of Spain who was then the chief of the Department at St. Louis. From an ancient map of the old town made in 1793, (now in the possession of the writer) the founder of New Madrid must have been impressed with the idea of her becoming the metropolis of the Mississippi valley, and in the course of time would rival her namesake, the far famed capitol of old Spain. The town originally extended from the mouth of Bayou St. John, on the east, to the outlet of Lake Ste. Marie on the west, fronting about one mile on the river, and running back to the depth, of the same extent; where the town was separated from the plantations, by a wide plateau or commons. The streets of the old town, were very wide and spacious, crossing each other at right angles; in different parts of the town, were left large sqnares for public buildings, churches and pleasure grounds. The town was laid out upon a beautiful plain, of cresent form, above the highest stage of water; in the centre of one of the most extensive bends of the Mississippi, with a delightful and commanding view for several miles both up and down the river, and surrounded by the finest lands in the Delta of the father of rivers, for miles in extent; presenting to the eye of the emigrant one of the most picturesque places in the west; such, reader, was New Madrid in years gone by. Founded in 1789 by Spain, ceded in 1801 to France, and transferred again in 1804 to the United States. The writer has been informed, by some of the "oldest inhabitants," that the different changes of Government, all took place in one day; (that is, so far as delivery of seizen was concerned) this was in the year 1804, when the Government of the United States took possession of the public property in the Fort, Archives &c. One Fouchey or Fourchet, was appointed the first commandant of the Post of New Madrid; but under his administration, but few emigrants arrived. He was succeeded in the year 1791, by Don Tomas Portell, who discharged the duties of civil and military commandant up to the year 1796. Many emigrants arrived during this period, principally from Canada, Vincennes and Kentucky—and New Madrid became quite a place of note. Don Carlos Dehault Delassus became commadant in 1797, and continued in office until 1799; during his administration of affairs the town continued to flourish, and the surrounding country became settled; a great many grants were made to the numerous emigrants from Virginia, Pennsylvania, Kentucky, Maryland and the other States of the confederacy; and also from Canada, Vincennes, Kaskaskia, St. Louis and Cahokia. Don Henri Peyroux De La Coudrienere, succeeded De Lassus about 1799, and continued in office after the cession to France. Messrs. John Lavalle, Pierre A. Laforge and Dr. Richard J. Waters, all exercised the functions of civil commandants, pro tem, for a short time, until the country passed to the United States, and it became the district of New Madrid, Louisiana Territory.

From all the information, within my reach, I have been unable to learn much of the biography of the early commandants. Portelle was the only Spaniard who held office at this post, De Lassus, Peyroux and Laforge, were all natives of la belle France, Lavelle was a Canadian, Dr. Waters from Maryland. They are all represented to have been men of considerable energy; generally highly educated, easy in circumstances, endowed with good native sense; affable in man-

ners; they soon acquired great influence in the community; and became the *leading spirits* of the infant colony. Portelle and De Lassus left the country soon after retiring from office, Peyroux returned to his native land about 1810 where he died some years ago. Laforge, Lavalle, and Waters, remained in the land of their adoption; they became prominent men in the affairs of the country after its cession to the United States. They all lived many years after the change of government, and died regretted by the community, they left behind them numerous offspring, who retain the position of their ancestors in the old county of New Madrid. During the administration of Peyroux, the village of Little Prairie, about thirty miles below New Madrid, was laid out by Captain Francis Lesieur, a Canadian, who was appointed commandant of that village; in a few years it became a flourishing village; the inhabitants were principally Canadians and Creoles, with a few hardy pioneers from Kentucky, Virginia and North Carolina.

The early inhabitants of the two places were generally intelligent, fond of adventure, easy in circumstances; devoted to rational amusement, they sought wealth only as a means of enjoyment; and as the poet says "for the glorious privilege of being independent." Their era was marked with no important improvements in arts, commerce or manufactures; they enjoyed a mild climate, a rich and productive soil, that was lavish in the production of the great necessaries of subsistence; their exports of commerce, were confined to cotton, and the furs and peltries that were annually brought to the post by their Indian neighbors. These articles found their way to European markets by way of New Orleans and the great lakes of the north, and they received in return such commodities and luxuries not to be found in frontier settlements. They lacked that "go-aheadism" of this progressive age; but possessed in an eminent degree that urbanity of manners, that goodness of heart, that adds so much to the social relations of life; and take them all in all they were a happy people. Such were the early pioneers of New Madrid and Little Prairie, but the ravages of time, and the encroachment of the great river, as she rolls onward to mingle her turbid waters with the ocean, have almost swept away, what was once New Madrid and Little Prairie. The old fort, the quaint old churches, their cemeteries, where the remains of their early fathers rested after the journey of life, all, all, lie beneath the turbid waters of the mad river; in a few years more, there will scarcely be track or trace, to point the stranger, where once stood New Madrid and Little Prairie.

The present town of New Madrid was laid out immediately back of the old one, in the year 1820, it having been selected as the county seat for the present county of New Madrid; after the boundaries of the county had been narrowed down to near the constitutional limits. The county of New Madrid in early times embraced, within her boundaries, all that portion of S. E. Mo. out of which the present counties of Scott, Mississippi, Stoddard and Dunklin have been formed: and the then county seat was Winchester, twenty miles north of this place. This place is beautifully situated for commercial and industrial pursuits; seventy-five miles below the mouth of the Ohio; uninterupted by the droughts of summer or the frosts of winter; an unob-

structed navigation to the great commercial emporium of the valley of the Mississippi; and should now, if proximity to market, cheap transit upon the products of the county; great facilities both in commerce and agriculture; be a growing and prosperous town; the seat of an extensive inland trade; with N. E. Arks. and S. E. Mo., bound to us by cordons of railroads or turnpikes, threading their way to our neighboring towns, and binding us together in close brotherhood. No county in the State can surpass ours in the production of corn, (our great staple); wheat, oats, rye and potatoes yield well to the industrious farmer: our forests abound with the finest timber, such as oak, ash, walnut and cypress; this a great element of wealth, and in some parts of our common country, would give a livelihood to hundreds of industrious laborers.

Our swamps and lakes abound with great quantity of fowls and animals of the fured tribe, and are anually a source of profit to the hunter, and of considerable revenue to the county. No connty is better adapted to plank or railroads; and no where could they be built with less cost. A road could be built from this place, in any direction through the country, and not meet with an elevation where grading would be required over two feet. Bog iron ore has been found in the bed of a lake in this county, about eighteen miles from this place, and it has been pronounced, by competent judges, to be very rich. With all the natural advantages of position, soil, and climate, our place and county have not rapidly advanced in population, or general improvement. Three causes have had a tendency to retard our progress,—the first of which applies more particularly to the town, and the others to the country at large: our place being in the centre of a bend of the river, the banks are not permanent, but subject to continual falling, or *caving in*; every year the river encroaches upon the owner of the soil; and little by little, it slides away. This continues year after year, unless the river takes a mad freak, and finds a channel elsewhere. All the towns upon the Mississippi, with few exceptions, from the mouth of the Ohio to the Gulf, have suffered from this cause; and their growth and prosperity checked. The second obstacle to our progress is, that our country has been visited by earthquakes—that in 1811-12 great damage was done to the country; and the inhabitants had to seek refuge in other portions of the west. Wherever New Madrid is known, her name is associated with earthquakes. The emigrant, as he wends his way westward, passes by the ill-fated place, and seeks a home farther West, South, or North: but the march of time is clearing away the rubbish that enveloped our true history; and the force of prejudice is fast giving way to the light of reason and common sense; and the overlooked and long neglected country is being sought out by the emigrant.

The third, and most potent obstacle to our advancement in wealth, population and prosperity, and at the same time, most easy of remedy is the great swamps or submerged lands that almost encircle our county; stretching along our northern and western boundary, until lost in "the big spread of Arkansas." Owing to the extent and magnitude of this evil, it is beyond the reach of individual capital and enterprise; and as the immense waste belongs to the General Government, the task of removing this blight upon our land, by early and speedy action,

is the duty of the Government. When in 1815, our population were suffering from the injuries sustained from the dire visitation of earthquakes, Congress magnanimously donated a part of her wide domain to each actual sufferer; although, our Government was then burthened with a heavy national debt. That calamity was sudden, and its injurious effects immediate. The one now, that preys upon us, grows with our growth and strengthens with our strength, laying waste immense tracts of fertile lands, and sowing the seed of loathsome disease among our people. Is it unreasonable in us then, to hope that Congress will again come to our aid, and rid our land of so great a curse; at the same time, be amply rewarded by the reclamation of some of the finest lands in the State?

I verily believe that the same quantity of land donated for the sufferers by earthquakes, in 1811-12, would reclaim this now valueless country; it would bring thousands of dollars in the Public Treasury, and afford homes to hundreds of our hardy yeomanry, instead of a refurge and hiding place to the beast of the forest.

With all the drawbacks that surround us, with all the prejudices against our climate,—the health af our country—the annual visitation of earthquakes—the rather dilapidated appearance of our village, as presented to the eye of the traveler, as he wends his way by us on the brow of the broad Mississippi—our country still, is steadily progressing, *slowly but surely* in her onward march. The industrious farmer is annually extending his possessions: the dense forests are giving way to the woodman's axe; and pleasant farm-houses are springing up everywhere. Wet and marshy lands that had lain vacant for years, have been brought, by the skilful farmer, into successful cultivation, yielding a rich reward to the deserving owner. There has been shipped from this point, from the 1st of August, '49, to 15th February, 1850, as follows: Corn, in bags from wharf-boat of Messrs. Cox & Wright, fifty-five thousand and ninety-our bags corn —equal to 129,550 bushels; Potatoes, one hundred barrels—equal to two hundred and fifty bushels; Oats, five hundred and twenty-six sacks—equal to twelve hundred bushels. From wharf-boat of Messrs. Watson & Dawson, thirty-one thousand five hundred and fifty bags corn —equal to seventy-eight thousand eight hundred bushels; four hundred and forty-seven bags, and barrels Potatoes—-equal to one thousand one hundred and seventaen bushels; eight hundred and five bags oats,—equal to two thousand and twelve bushels; seventeeen bags wheat,—equal to forty bushels. Amount of stock as follows: cattle, four hundred and seven head; horses and mules, fifty head; and hogs, one thousand four hundred head—-making the aggregate as follows:

Corn,	208,300	bushels	at 30c.	per bush.	$62,790 00
Oats,	3,212	"	"	"	963 60
Potatoes,	1,367	"	35	"	478 35
Wheat,	40	"	60	"	24 00
Horses and mules,	50	hd.	Avg. $40	per head	2,000 00
Cattle,	407	"	8	"	3,256 00
Hogs,	1,400	"	2	"	2,800 00
Total,					$72,311 95

From the following shipping points in our county, I have been unable to get the amount of shipments this season : James Bayou, Phillips' Landing, Martin's Landing, Toney's, Point Pleasant, Ruddle's Point, Cypress Bend, Little Prairie, Islands 16 and 18,—from all of which points considerable produce and stock are shipped. The furs and peltries collected here, are very considerable ; last year they amounted to upwards of fifteen thousand dollars ; and I have been informed by several of our merchants, that the collections this season will exceed last, several thousand dollars.

The increase of our slave population is greater (in proportion to population) than any county in the State, for the past four years. I have no doubt but the corn crop for 1849 (over and above for home consumption), will reach 600,000 bushels, which at 30c. per bushel, would amount to $180,000! The article of cord wood, for steamboats, is a considerable item of wealth to our inhabitants ; and the sales for the past year will average 50,000 cords, which at $1 25 per cord, amounts to $62,500! Ours is the only point below the mouth of the Ohio, to which a railroad could be built, from the northern part of our State to the Misssisippi river, that is not subject, or at least affected by overflow ; and I venture the assertion, if ever an examination is made by a competent engineer, for the location of the Lexington Railroad, through the mining region to the Mississippi, below the mouth of the Ohio, that New Madrid will be the terminus selected, if cheapness, practicability and a level country, are any advantages to be gained in the construction of thoroughfares. I sincerely believe that a road could be built from this point to our county line (twenty-two miles) in the direction of the great mineral regions, twenty per cent. cheaper, than the same distance in any other county in the State. Blest with a genial climate, a rich and productive soil, abounding with all the natural elements of wealth, the county of New Madrid requires but the application of the inventive genius of the age, the adoption of a liberal system of internal improvements, in the opening of direct and cheap thoroughfares to her immediate and less favored neighbors in South East Missouri and North East Arkansas, to make her one of the most populous and prosperous counties in the State. I feel deeply interested in the growth and prosperity of our giant young State ; and more particularly, in the old mother of counties, in South East Missouri ; and as she is the source from whence sprung many of the present growing counties in the South East part of our State, I would wish to see her adopt such a system of improvements that would add much to her wealth and population, and that in her old age, she would be a beacon light to guide her offspring in the way that leads to individual and national wealth, prosperity and greatness. Your obed't servant,

Wm. S. MOSELY.

New Madrid, Mo., March 1st, 1850.

ART. V.—SUBMERGED LANDS OF MISSOURI.

Among the published proceedings of the "South-western Convention," held at Memphis in November 1845, we find the following report on the Submerged Lands of this State. We publish it in this place, mainly, because of its connection with the subject treated of in the preceding article. But, whilst submitting it to our readers, we feel constrained to remark that the tenacity with which the General Government holds on to these lands, is unjust towards the States in which they are situated. Besides their influence on the health of the inhabitants, these swamps cut off a large district from the navigation of the Mississippi, and greatly retard its improvement. In their present condition these lands are not susceptible of being surveyed, and we can see no reason why the Government should desire to retain them, unless it is expected that sooner or later the people will drain them at their own expense, and then pay into the Treasury of the United States the value thus imparted to the land.

We begin to hope, however, that this speculating policy on the part of the Government, is about to undergo a change; and we trust that before the end of the present session of Congress, a bill will pass that body, relinquishing the Submerged Lands of Missouri to the State. Editors.

REPORT ON THE SUBMERGED LANDS OF THE STATE OF MISSOURI.

The deepest interest is felt by the inhabitants of the State of Missouri and the neighboring States to reclaim the submerged lands of the State of Missouri. The whole Union longs to see these immense tracts of land, which now lay desolate and unfit for cultivation, made to smile by the industrious hand of man. It is of the most vital importance to the West and South that the submerged lands should be drained and reclaimed, and rendered inhabitable. The portion of the State of Missouri inundated, comprises the counties of Cape Girardeau, Scott, Mississippi, Wayne, Dunklin and New Madrid. There is about 2,160 square miles which are low and swampy lands in the above counties. A great portion of the above counties is covered with water, and possess an alluvial soil, the lands are low and marshy, interspersed by streams, rivers, lakes, swamps, bayous, bogs and marshes: although a part of the swamps is not submerged by water the whole year; but the waters remaining stagnant on these low and marshy lands during the hot summer become very impure and putrid. The vegetation being very rank and abundant on this rich and marshy soil, mixes with the putrid waters, and when decomposed fills and renders the atmosphere impure and unhealthy, which adds greatly to disease; and, as the waters are dried up from these swamps, there is

a sediment, stench and poison left on them that causes disease and death, not only to those that live on their borders, but, likewise, to the inhabitants that live in the vicinity. A great portion of these swamps is not susceptible for the habitation of man, except a numberless group of Islands interspered, which are occupied during certain seasons of the year by trappers and hunters. It is a remarkable fact, that there is a chain of low, level and marshy lands, commencing at the city of Cape Girardeau, in Missouri, and extending to the Gulf of Mexico; and between these two points there is not a rock landing except at the small town of Commerce, on the west side of the Mississippi river; there, is furthermore, only one ridge of high land from Commerce to be met with on the west side of said river, which is at Helena, in Arkansas. From the city of Cape Girardeau, running into the State of Arkansas, there is a strip or tongue, 350 miles long, of beautiful and excellent lands along the western margin of the Mississippi, which is well inhabited, having an average of ten miles wide, and is entirely cut off, and stands isolated from the interior of Missouri and Arkansas, by the great swamps lying west of it, and deprives and cuts off all communication from the interior southern part of Missouri and northern part of Arkansas, for the distance above mentioned, to the Mississippi river. The inconvenience experienced and felt by the inhabitants west of these swamps in not being able to get the fruits of their labor to market, is very unprofitable and injurious to the commerce of the above mentioned States. The lands west of these swamps are very fertile and rich; the timber is unsurpassed in size amd beauty. It is much to be regretted that all intercourse with this beautiful country, in the interior of Missouri and Arkansas, is thus cut off, producing incalculable injury in point of Commerce and Agriculture.

The earthquakes of 1811-12, proved very injurious and disastrous to the south of Misssuri, and was felt far and wide. They changed the course of the streams and rivers, which occasioned the waters to spread in every direction: and made high land where it was low previous, and in elevated places sunk them—thus causing the rivers and streams to overflow a great extent of country. These earthquakes of 1811-12, are still remembered by many of our oldest settlers; when the whole land was moved and waved like the waves of the sea, and the majestic oak bent his head to the ground like a weed, and the terrible fact that the waters of the mighty Mississippi, opposite to the town of New Madrid, rolled up stream for ten miles, carrying on its bosom barks, keel-boats and every species of crafts, with a rapidity unknown, and causing destruction of property and life.

The swamps commence below the city of Cape Girardeau and extend to Brown's farm six miles below Cape Girardeau. This is the head of White Water or Little River swamps, which are divided from St. John's swamps by a chain of high lands, in the shape of a horse shoe. in Scott county. This high land is eighteen miles long and ten miles wide, and extends from Cape Lacreuse river to the town of Commerce, on the Mississippi river. Then from the town of Benton, which is on said chain of high lands, in Scott county, there is a tongue of land that extends to New Madrid, on which the large New Madrid road runs; the length of the road is thirty-eight miles;

and the tongue of land three miles wide; and makes the line of division between the swamps of White Water or Little River on the west; and St. John's swamps on the east of said road. Let it be particularly remarked, that the waters that flow east of the New Madrid road empty into St. John's swamps, and all the waters west of said road empty into White Water or Little River swamps.

There are four large swamps that originate in Missouri; that is to say, the White Water or Little River swamps, the St. John's swamps, the James' swamps, and the St. Francis swamps.

The White Water or Little River swamps commence between Cape Girardeau, and lie immediately west of said New Madrid road, except a small chain of it that extends along Cape Lacreuse river, which flows into the Mississippi, four miles below Cape Girardeau city, and are on the northern side of said chain of high hills that forms Horse Shoe, in Scott county; and then these swamps flow into New Madrid and Dunklin counties; then flowing into the State of Arkansas, and empty into St. Francis river, at a point west of Greenock in Crittenden county, in Arkansas. Their length in the State of Missouri, in a straight direction, is 103 miles, and 10 miles wide on an average, covering the counties of Cape Girardeau, Scott, Stoddard, Dunklin and New Madrid. These swamps are made by the overflow of the Mississippi river at their head, between the city of Cape Girardeau and the mouth of Cape Lacreuse; and by the lakes and streams on the west side of said swamps, and the Castor river, which empty said swamps of White Water or Little River.

The St. John's swamps commence below the town of Commerce, and at St. John's lake; and it is well to suggest, that this said lake is filled with rich iron bog ore, a specimen of which can be seen in my possession; and then the swamp continues to flow on the east side of New Madrid road, and empties itself into St. John's bayou, just at the town of New Madrid. These St. John's swamps are forty-five miles long and six miles wide. These swamps submerge the counties of Scott, Mississippi and New Madrid; and are formed by the waters of Lake St. John's, and the overflow of the Mississippi.

The James' swamps lie between the St. John's swamps and the Mississippi river, which submerge the county of Mississippi, and empty into James' bayou, at the dividing line between New Madrid and Mississippi counties. The James' swamps are thirty miles long and ten miles wide; between the swamps St. John's and James', are Mathews, East and Long Prairies, which are good lands. The James' swamps are formed by the overflow of the Mississippi river.

The St. Francis swamps commence in Wayne county, fifteen miles below Greenville; then dividing Stoddart and Wayne counties, and Dunklin in Missouri, and Green county in Arkansas; and then continue their course to a point west of Memphis, in Tennessee. The St. Francis swamps in Missouri are seventy-five miles long, and ten to twelve miles wide, and from the Missouri line, extend about seventy-five miles in Arkansas, and width, about twenty miles, and then lose themselves into the St. Francis river.

The following plan is submitted to drain and reclaim the inundated lands in Missouri:

The swamps of White Water or Little River are formed by the overflow of the Mississippi river, between the city of Cape Girardean and the mouth of Cape Lacreus river, a distance of four miles on the Mississippi. The only way of stopping this overflow would be by making a levee along the Mississippi, about half a mile distant from its banks, so as to make room for the caving in of the banks of said river, from the city of Cape Girardeau to the mouth of Cape Lacreuse river, to the high chain of hills in Scott county, which forms Horse Shoe. The cost of throwing a levee between the two above mentioned points, which is four miles long, would be, at six thousand dollars a mile, twenty-four thousand dollars. This levee would check the overflow of the waters of the Mississippi river from the swamps of White and Little River. These said swamps flow, as before mentioned, around a chain of hills in Scott county, and west of New Madrid road. Then it would be necessary to make a draining canal, commencing below Cape Girardeau city, to run through the above mentioned swamps, so as to collect and throw all the waters into White Water or Little River. This canal to extend to about west of New Madrid, where lie the big swamps of Little River; the length of said canal would be seventy miles. The cost of this canal, at three thousand dollars a mile, would be two hundred and ten thousand dollars. It would require another canal, commencing about twelve miles below Bloomfield, in Stoddart county, to run in a direct line below the town of New Madrid, which would drain a vast quantity of water from Lakes Nic Cormy and St. Mary's—all of which are branches of swamps of White Water or Little River. The length of the canal would be about twenty-five miles; the cost of it, at three thousand dollars a mile, would be seventy-five thousand dollars.

Then another canal from the swamps of Little River, to flow into the Mississippi, at Point Pleasant; that is, a draining canal, commencing just west of said Point Pleasant, about at the junction of Little River and Castor. The length of the canal about twenty miles; which would drain great quantities of water that cover Dunklin and New Madrid counties. It is well to state that Little River swamps, west of Point Pleasant, are twenty-seven feet above the level of the Mississippi waters at a medium stage; and Little River at a low stage—of which level was taken by Judge Turner of Virginia, a scientific gentleman, in the year 1825—for which information, and many other facts, I can refer to Godfrey Lesfleur, Esq., Col. Walker, Capt. Alphonsa Delarodesie and Richard Phillips, persons of great integrity, and very intellectual gentlemen; of whom mostly were born and raised on the borders of said swamps. The cost of above draining canal, at three thousand dollars a mile, would be sixty thousand dollars. The said Little River swamps then flow south, into New Madrid and Dunklin counties; and then into the St. Francis river, in Arkansas. It will be essential to remove all obstacles in Castor and White Water or Little River; that is, by removing all the trees, logs and stumps in the bed of said rivers, so that all the waters would concentrate into Little River, which empties into St. Francis in Arkansas. The cost of removing said obstacles in the beds of said rivers would be fifty thousand dollars.

The draining and reclaiming the St. John and James swamps would be by making a levee from the town of Commerce, in Scott county, along the Mississippi river to New Madrid, where the banks overflow; and said levee to be at half a mile from its banks. This levee would be one hundred miles long; and the cost of this levee, at five thousand dollars a mile, would be five hundred thousand dollars.

The St. John swamps will require a draining canal from St. John's Lake, to flow into bayou St. John's, about eight miles above New Madrid; then removing all obstacles in said bayou St. John's, the canal would be about forty miles long, which would reclaim all the swamps of St. John's; and would cost one hundred and twenty thousand dollars.

The swamps St. James would require a draining canal from its head, near Mathew's prairie, in Mississippi county, to flow into James' bayou, which empties into the Mississippi river, across the dividing line between the counties of Mississippi and New Madrid. Thus the canal would be twenty-five miles long; and it would be necessary to remove all obstacles, such as logs, trees and stumps, out of the bayous St. John's and James—and these bayous would be navigable for flatboats and keelboats. The canal would cost seventy-five thousand dollars; and removing obstacles out of St. John's and James' bayou, five thousand dollars.

The St. Francis swamps can be drained and reclaimed by clearing and removing all obstacles from the bed of the St. Francis river; that is, from its head in Missouri, to the Arkansas line, so as to concentrate all the water within its channel, for fifty thousand dollars.

The amount of submerged lands in Missouri is 2,160 square miles, as far as it can be ascertained at the Land Office, making 1,328,400 acres. The reclaiming of these lands would afford sufficient remuneration to justify their vast undertakings. The amount of the cost of the whole work would be one million one hundred and sixty-nine thousand dollars. The lands are now valueless, and can never be made available without being drained and reclaimed. The proper manner of reclaiming these lands would be for the General Government to cede these submerged lands to the States, with the special condition enjoined upon the State of reclaiming them. The State would feel more interest in executing this work, for it would come under its immediate concern, and for the expense attending this work the State would be repaid by the sales of the reclaimed lands. The General Government can never dispose of these inundated lands, nor the fertile lands bordering on these swamps, without their being reclaimed, for no human being can inhabit on the borders of these lands without endangering his life. The voice of humanity speaks aloud, that these lands should be rendered fit for cultivation and for the habitation of man. Some of the best inhabitants of our State, and the old settlers of the country, live on the borders of these swamps. It is well known that they suffered much from the earthquakes of 1811, and 1812; and they braved many dangers in the last war, in the struggle with the savages;—it is but just, generous and equitable, that the Government should render their and their children's situation comfortable and wholesome. There exist strange and unknown diseases of the most dreadful and malignant character—dealing death in

every direction, and spreading throughout the southern part of Missouri, terror to its inhabitants. The poisonous winds blowing over swamps, seem to carry on their wings, death to the young, hardy, strong, infirm and old, alike. These lands are now valueless. These low lands are susceptible of being reclaimed; if so, would be unsurpassed in richness of soil, excellence of timber, and would invite thousands of immigrants to inhabit them; and towns and villages would spring up in the whole country, and an active population would cover its whole extent,—the lands would be made to smile with rich harvests that would cover its surface—the south of Missouri would be one of the garden spots of the West; for its lands would be level and beautiful, and would be as fertile as any on the face of the Globe.

All of which, with the accompanying Map is respectfully submitted.

I therefore propose the following resolution:

Resolved, That in the opinion of this Convention—it is both the interest and duty of the General Government to cede the inundated lands to the States in which they lie, with the special condition to drain and reclaim them.

FERMIN A. ROZIER, *Chairman.*

AGRICULTURAL DEPARTMENT.

ART. VI.—WOOL GROWING IN THE SOUTH AND WEST.

We extract from the Patent Office Report, the following able and interesting article on "wool growing," from the pen of Mark R. Cockrill, Esq., of Tennessee. No man in the United States has, perhaps, devoted so much attention to this branch of agriculture, as the author of this treatise; nor is there any whose statements and opinions upon this subject, are entitled to more confidence. The experience and observations of the writer have established some important facts which ought to be known and appreciated by every American.

The opinion prevails very generally, that the United States are not as favorable to the growth of fine Wool as Europe; and, especially, that the Southern States of the Union are less favorable than the Northern. Mr. Cockrill has proven that these opinions are erroneous: and he is entitled to the gratitude of his countrymen, for his efforts to remove their prejudices in regard to these subjects.

With a reasonable degree of attention, the South and West could produce an almost unlimited amount of Wool, without lessening, materially, their other products. This would be an entire gain to the wealth of the country; for, unlike our other staples, it would not impair the fertility of the soil. How long will the farmers of the West and the planters of the South, neglect this branch of husbandry, and refuse to improve so great a source of wealth?

WOOL.

NASHVILLE, TENN., *November* 1, 1848.

DEAR SIR: Your valued favor, requesting agricultural information, was duly received.

After some reflection, I have concluded to confine myself to one subject mainly—that is, wool growing; though your enquiries embrace many other subjects which have come under my observation.

The annual import of the United States is about eight millions of pounds of raw wool; when, in my opinion, we should export very largely; and if the opinions which I here introduce should aid in effecting a change, I shall be fully compensated.

In your annual report for the year 1847, I find sentiments expressed by Charles L. Fleischmann, Esq., from which I dissent. He says that "Prussian Silesia, a province in the north of Germany, has gained the reputation of producing not only the finest wool, but of being the *only market* where thorough blood can be obtained." He again says: "Several attempts have been made in the United States to raise fine wool, but they have never fully succeeded; and to effect a profitable result, we must bring from Germany a thorough-blooded flock. It will astonish some of our American farmers, when they are assured that a single ram is sold at from fifteen hundred to two thousand dollars." I contend that the United States is a better wool growing region than any part of Germany, or any portion of Europe; and that the low latitudes of the United States have advantages over the high. I contend that as fine wool is now grown in the United States as can be produced in Germany; and as thorough bred sheep likewise.

I contend, furthermore, that the low latitudes, from 36 deg. down to 28 degrees, in the United States, can grow as fine wool as any part of Europe or America; and that as fine rams can be bought in the State of Tennessee for fifty dollars, as those in Germany which sell for two thousand.

Holding these opinions to be true, I shall attempt to offer some of the evidence which produced them in my mind

In 1814, I found myself a young Tennessean, and the distant fame of the merino sheep, with his golden fleece, greatly excited my curiosity, and, in search thereof, commenced a trip to the east. Here commenced my study of sheep and wool growing; and from that period to the present I have given it close attention. I have kept samples of wool, with labels, giving the date, pedigree, &c., for thirty-five years. In 1823 and 1824, I imported from Saxony merinos of the purest blood; and from that date to the present I have samples of that importation with all the experiments I have made in crossing for improvements. I have many samples from the most improved American flocks, and many Saxon samples likewise. I have lately received from Mr. Taintor some samples of the best sheep in Europe, with two animals of the selection made for Mr. Scoville, of Connecticut, being from the best flocks in Europe. I have also the card of eighteen samples of wool made by Mr. Fleischmann, from the finest sheep of Silesia, and other sections of that country,

If, therefore, a study of thirty-five years—if endless experiments in the time, with diligence, perseverence and devotion to the subject—

should qualify me to judge of wool by the samples, and the qualities o the bearer by their presence, I have come to correct conclusions, as above stated; for, by comparison, I find Tennessee growing as fine wool as any of the samples before me, and there are many other flocks in the United States doing the same. This is not a general thing, of course, and I presume the fact was not known to Mr. Fleischmann when he said the attempts in the United States to grow fine wool had failed.

A few flocks in the United States have continued pure—the best importations from Saxony in 1823-24, when she had reached a higher reputation in her flocks than Spain, or any other division of Europe. From and after this period, the history of wool culture in Saxony shows that she gave up *quality* for *quantity*. But the thorough bloods that had been sent off to the United States before this, in the hands of a few careful proprietors, who have been true to the subject, still preserve all the beauties of the fleece which had given distinction to Saxony, previous to her change. These flocks now in the United States, produce wool as fine in fibre, freer from hairs and of greater length and softness, than the present German flocks; hence, I think it the best broad cloth wool grown on the globe.

The descendants of that importation in the low latitudes of the United States, are *superior* to those brought over; which I attribute to climate.

I have said above, that the low latitudes have the advantage in wool growing.

An opinion has long prevailed, and will not be changed till experience teaches otherwise, that the warm climate will not produce fine wool. This idea seems to be supported by illustrations drawn from those animals bearing fur. This is fair as an argument, but yields to proofs of a higher grade.

In 1839 I became a cotton grower in the State of Mississippi, in latitude 32 1-2 ° north, and removed my Saxony flock from Tennessee, in latitude 36 °, to my cotton plantation, where I kept them six years. I have the samples grown in that latitude, and consider them the best samples of wool I have seen. They possess more of the requisites for a perfect fleece and fitness for superior broadcloth than the produce of the same sheep in latitude 36 °—my present residence. I attribute it to this fact, that in Mississippi the food is better adapted to sustain a healthy condition of the skin, which is kept oily by warmth; green herbage and succulent food during winter as well as summer. The pores of the skin were not closed, the wool did not cease to grow, there was no fever from housing, crowding, and from dry food, but a regular, uniform, and continuous growth of fleece the whole year; which cannot, I think, be produced in any latitude as high as 51 °; which is the parallel passing through the north of Germany, where it is necessary to feed six months in the year—from November till May. But *economy* I rank as the chief advantage of the low latitudes, where lands are cheap, very cheap, and green food for winter as well as other seasons. My observations for six years' residence, and to the present time, by annual visits, in latitude 32 1-2 °, prove to my mind that the tendency is to improve rather than deteriorate the quality of the wool, even where the finest wools are attempted. A flock in the warm climates requires but little feed-

ing, a very small investment in land, and but little labor in preparing for winter; hence, economy points to a region south of 51° as the true sheep region.

If I have offered any evidence which would be satisfactory to others on the subject, I would suggest that the culture of wool be incorporated with that of cotton, as the *latter* seems to be depressed far below its *intrinsic value*—perhaps by over production; but, be the cause what it may, it is very low, and a suggestion of any plausible substitute would be worthy of experiment.

I suggest wool growing upon the tired lands in the cotton districts; sow down rye, peas, oats, and whatever else may grow well in that region, and pasture the flocks thereon; and in this way renovate and restore lands, instead of a more expensive method of manuring. This would increase the growth of wool and decrease the quantity of cotton.

The United States export two millions eight hundred thousand bales of cotton, and import eight million pounds of wool annually. In addition to the tired lands in the cotton region, there are many millions of acres of land in the south and west unfit for the plough, but yet growing excellent food for sheep.

The tendency of the merino is to ramble and take a great variety of food; hence they are better fitted for the hilly sections of the south than any other species of stock; and these lands which are now a tax upon the proprietors, might, by industry and attention, at some future day be covered with flocks, attended by shepherds, aided by his faithful dog; and thus convert the scattered herbage into the golden fleece, yielding profit to the industrious and wealth to the nation.

The growth of sheep adds to the necessaries of life. No food is more healthy and delicate for the table; no clothing more comfortable for man. There, must therefore, be a demand for these necessaries, (wool and mutton,) as we are so rapidly increasing in population.

When the councils of Europe and America assemble to deliberate and legislate, they appear clothed in the fleece of the superior merino flocks.

National pride should be stimulated at home, and an American congressman should feel proud when he can say "I wear a coat as fine as any nobleman of Europe, and the flock which furnished it grew in my own State, and was not imported from a foreign land." To my brother farmers of the west, and cotton growers of the south, I say it requires no importation from Germany or elsewhere; no large investment of capital in a foreign land to commence the wool culture, and to prosecute it profitably anywhere in the United States, from Maine to Texas.

Capital, skill, and industry, are requisite to effect great results in all pursuits; but much, very much, may be effected in wool growing, with a small stock of cash, when combined with other agricultural pursuits. Those of small capital may commence the business with a few hundred, or even one hundred ewes of the common stock, which may be purchased at one dollar each. Then select rams of thorough blood, from those flocks which have preserved pure the best Saxon importation of 1824. They are to be found in the United States, in Ohio, Pennsylvania, Connecticut, and Vermont; and if not certainly found *there*, call on *Tennessee*, and I know they can be found *there*.

It will not require two thousand dollars, one thousand five hundred dollars, six hundred dollars, or even four hundred dollars to purchase them, as it does in Germany, as Mr. Fleischmann shows, but merely the fraction of a hundred dollars. Do not hastily conclude that this great difference in price, must result from a difference in quality and value.

The foreign price is artificial, and far above the true value, produced by accumulated wealth, pride, and strong competition. Our home price is below the true value for the want of these stimulants.

My directions for a selection of rams, after you have found the flock of satisfactory pedigree, are these:

The fine Saxony ram, combining the proper quality for breeder, should possess a round, long, well-proportioned barrel, giving ample room in the chest, and insuring a constitution of quick, lively action, with a fine, soft, thick, long fleece, by all means uniform in quality, with a fine smooth skin; for without a fine smooth skin, which is the soil on which the crop is to grow, there will not be that uniformity in the fibre, which is so essential to the manufacture of fine cloths; a rough coarse skin will, like a badly prepared soil, yield an uneven crop, some fine and some coarse, varying in felting properties, and will be seen in fine fabrics. The roundness of the body is produced by a well arched rib.

Avoid flat-sided bucks, their offspring will be delicate, sickly, and short-lived; they want space for the lungs and digestive organs, and are liable to disease, for want of resisting capacity in the system.

Having the ewes and the bucks, they are to be kept separate and apart, until October, generally, *here* varying the yeaning time according to the latitude, but producing the lambs at the opening of spring, when succulent vegetables may be found by the ewes.

The period of gestation is one hundred and forty-eight days, and one buck may be allowed to fifty ewes.

The first season will yield a young flock of half bloods, and the second and third will begin to show the compounding influence of annual births, with improvements in form and value.

I have not space, nor is it designed in this article, to give any system of rules for the management and treatment of flocks, nor would any general statement of profit be of any service.

The system of treatment would vary and become widely different, as different latitudes are fixed upon for the operations. The management in latitude 32 deg., should vary much from that in 45 deg., in the United States; but, as a general remark, I would select dry undulating lands, give daily exercise in all suitable weather, never confine them long on the same grounds or pasture, and furnish moist food and not dry, if to be avoided. They should not be crowded in close houses and forced to breathe a vitiated air.

The merino is a hardy animal, and free from disease, if not produced by improper management. They have constitution and much vitality, and require exercise, and a variety of moist, nutritious food, and a dry *resting place*, not shelters, if the climate be warm, but hill sides, which send off by the rains, impurities and allow a free circulation of air.

Our botanic doctors select from the herbs of the forest their remedies for all the diseases of the human family; so sheep, guided by the

instincts of nature,when allowed to ramble in the fields and forests, will, by a judicious selection of astringents and laxatives, maintain good health. Details of disease are not attempted in this; if so, I could report the result of thirty-five years' practice. My remedies, chiefly, with my own flock, are preventives.

Cotton has its appropriate latitude, 32 1-2 deg., and admits of but little variation; but the latitude of wool is from Maine to the mouth of the Rio Grande, from the Atlantic to the Pacific. In any portion of this wide spread domain, wool culture may be made a fair profitable branch of agriculture.

If I should be governed by my own experience in this matter I should incline to select those sections of the country which would not be expensive in lands; open and mild in winter, to avoid the six months' feeding in Germany, and where the fleece can be kept growing all the year by green, succulent food; thereby preventing a check in growth, which injures the uniformity of the fibre, omitting the expense of long housing and feeding, during the rigors of the long winters.

Can competition be feared from the old world, filled to overflowing with human beings, with lands renting from six dollars to ten dollars per acre, and compelled to feed for half the year? Industry and energy, answer, no. And may these sentiments, aided by national pride, and a laudable desire and competition in the warm and cold climates for the golden fleece, bring up this neglected subject to its proper influence in American agriculture.

The labor of a nation is its wealth; and all good citizens are equally interested in its proper divisions and directions. The excesses in different branches should be directed into other channels by the talents of the nation.

Farmers who superintend the fields and flocks are not unusually inventive in plans, or skilled in political economy; may I not be excused, therefore, if I invoke the aid of the learned and talented statesmen of the United States (whether in or out of office) in the examination of the subject of wool culture.

Our natural resources appear to be boundless. The bearer of wool may treat with profits those lands fit and those unfit for the plough. My opinion is, that sheep may serve as a profitable renovater of tired cotton lands, from Charleston to Matamoras.

From my own experience in Mississippi and Tennessee, I can say that the finest wools for the best broad cloths may be grown in all the cotton regions of the United States; but as the greater consumption of wool is in the coarser fabrics, the habits of the southern people would point to it as most likely to succeed in the medium qualities. After shearing in the spring, I will furnish at your office samples of wool grown in 32 1-2 deg. and 36 deg., showing what has been accomplished in the attempts in the United States to grow fine wool, and furnishing strong proof in favor of the *warm climate.*

In Tennessee, we have no public exhibition of stocks by organized societies at present. I will, therefore, send you samples of wool, to test the correctness of the opinions which I have advanced. I should be highly gratified by an opportunity of exhibiting *thorough bloods* against any man in Europe or America—the points of comparison to

embrace size and shape of the animal, fineness, weight, and uniformity of fleece. This may seem to be boasting, but it is not so intended; for, as before stated, I have a Saxony flock, based upon an importation in 1823-'4, when the fame of her flocks was deservedly extended far and wide. I have given this importation my strict personal attention for twenty-five years, and have labored to cure defects and render them perfect. I only wish to ascertain if any one has done more—I care not from what country he may come, for I am confident he could have had no advantage in that particular.

The sheep has a domestic foe in the worthless cur, who often commits depredations upon the valuable flocks. Could this nuisance be lessened by a tax on the *extra number* kept at many places, leaving always the *watch* dog, to whose fidelity protection and attachment are ever due? if so, will legislatures generally extend this protection to the herds which I hope to see rapidly increasing throughout the country?

If there should be manifested any general disposition to adopt the wool culture in the Great West, I will endeavor to make public, for their benefit, in some agricultural journal, the results of my experience on two other points, which might be useful to many whose attention has never been directed to the subject, namely:

1st. General directions for the management of a flock in the South and West, embracing feeding, crossing, shearing and putting up wool for market, washed or unwashed, &c., &c.

2d. A system of remedies for the diseases which are most common among sheep; assigning the causes of the disease, when known, that they may be avoided by care and attention.

Many deaths will likely occur when there is a very limited knowledge of disease; but a little attention for a few years will remedy this objection.

I should, therefore, recommend beginners to commence with low priced ewes and a fine buck. The investment would be small, and the improved value of the offspring, from the merino crop, would prevent any loss, in the hands of the most uninformed, unless by gross negligence they should be suffered to perish.

In the lower districts of the United States, which are too warm for corn, and therefore unprofitable for the raising of pork, sheep may be grown as a partial substitute for pickled pork. The mutton, skin and wool, will compensate well for the investment and necessary attention.

I feel a deep and abiding interest in the prosperity and success of the cotton districts, and am confident that wool growing will aid to sustain them in times of difficulty and oppression, like the present, when the great staple, cotton, is forced below its intrinsic value, by causes abroad over which they have no control.

To avoid the influence of foreign wars, commercial disasters and bankruptcies in Europe, let the spindles and looms be brought to the corn fields of our rich valleys, near the cotton fields; draw off a portion of the labor from the tired lands of the cotton districts, and transfer it to the cotton mills; resuscitate the worn lands by peas, rye and oats, for the flocks.

A portion of all large cotton plantations may reduce the number of acres in cotton without affecting the yield, by adopting this rotation

and taking wool and mutton as the produce of the resuscitating portion of lands.

If such a system of management shall be generally adopted in the south, the sun of prosperity would again shine brightly.

I am not advancing the opinion that the south is a stock country generally, but I am satisfied it is adapted to sheep; they do not require the rich grass pastures and grain which are so necessary for other stock.

The south seems to be designed by climate, and other natural permanent causes, as the great producer of the raw material for clothing.

Another law of nature demands a rotation of crops to insure success in agricultural pursuits; but the south is not and *cannot* be a farming country, adopting the rotation usual in higher latitudes—yet it may adopt *wool growing* as a rotation, and still pursue the productions indicated by natural laws.

Variety in the productions of all countries is better, as a system, than any one staple; but the substitutes must be suited to the climate and soil. Hence, I say grow both cotton and wool; they will both prosper in the south.

In cotton, we have inferior, fair Louisiana, and Sea Island, yielding different prices, from 5 to 30 cents per lb. In wool, we have common, mixed bloods, and superior Saxony, worth from 15 to 100 cents per lb.

The superior cotton, Sea Island, is confined to a few islands on the coast of Georgia; but the superior Saxony wool may be grown in any State in the Union.

We are told that thorough bred rams, in Silesia, are now worth from $500 to $2,000 each. If any combination of circumstances in Germany could produce such a result, it certainly furnishes much encouragement to growers of the same stock in the United States, where lands are cheap, and the cost but little for wintering. At one tenth of those prices in the United States, the business of growing merinos for sale would yield very large profits.

Your report is a valuable public document, and I hope to see your office sustained and encouraged by Congress, and your inquiries extensively answered.

Your labors promise much good to agriculture, commerce, and manufactures, and to the prosperity of the country at large.

I thank you for the distribution of the samples of wool brought over from Europe by Mr. Fleischmann. They furnish valuable information to the owners of thorough bred flocks in the United States; for, by comparison, they can see what progress they have made in growing fine wool.

You will by no means consider me as detracting from the labors of Mr. Fleischmann, I disclaim any such design. His report, as published by you, contains a great deal of valuable information on the subject of wool and sheep; but, believing some of his opinions were calculated to produce erroneous impressions among those who are not informed on the subjects, I have endeavored to furnish some facts which have caused me to differ from some of the views expressed in his report, with no other object than a desire to have the whole facts presented to those who may read it.

I have lately seen a statement of a "letting for one year only," of 65 rams in England of the mutton stock, which averaged $135, some bringing $300. This was for the services for one season, when they are all returned to their owner.

What peculiar value do these rams in England and Germany possess, which may not be given to them here? None. These facts show promising signs for the future, to those who may steadily prosecute the subject of sheep growing in the United States.

The importations of raw wool, and the importation of immense quantities of manufactured woolen goods annually into the United States, shows that an extensive home market may be found for wool, which I hope to see soon supplied from our own farms, plantations, and mountains. Prosperity to the spinners of wool and cotton at home and abroad; but especially to the former! Away with all antipathies between the spinners and growers of these great clothing staples of our country! They should be identified in sympathy and mutual support, and by concert, add to the profits and prosperity of both. Individual *man* is weak and impotent; but associated *man* is powerful. So with interests of a kindred kind; acting separate and apart, and with jealousy towards each other, all may languish and decline; but, by association and mutual support, they may flourish and produce wonderful results.

Our great interests should be leagued together, as the States of the Union, if we hope for general prosperity. They are dependent one upon another, and the destruction or depression of any great interest is felt, by its recoil, on others throughout the land.

Sheep husbandry in the south and west is in its infancy; but a wide field is open for its development. It is a permanent, substantial branch of agriculture; because wool and mutton are among the necessaries of life, and there must be an increasing demand with an increase of population.

The price of sheep in Germany and England shows this to be so. It is a stock which multiplies with rapidity.

A flock of an hundred ewes should in eight years produce at least a flock of a thousand. It may be commenced with a small capital, and with but little preparation; or it may well engage capital, talent, learning, industry, and energy.

I remain yours, very respectfully,

MARK R. COCKRILL.

To the Hon. Edmund Burke,
Com. of Patents, Washington City.

ART. VII.—COMPARTIVE COST OF WIRE AND PLANK FENCES.

To the Editors of the Western Journal:

The February number of the Western Journal, page 339, contains an article on Fencing; purporting to show the comparative cost of

Wire and Plank, and &c., the statement alluded to has been I perceive, copied from a very hasty and imperfect sketch that I furnished not long since, to a friend, but which I neither designed or authorised to be published. For some time past, I have intended to offer for the Journal, an article on this interesting subject, to be "founded upon facts," in all essential particulars; to serve as a sure guide to all concerned. But have not been able 'till recently, to complete my enquiries and experiments. The subjoined statements are now submitted to the readers of the "Western Journal" in the full belief that they are substantially, if not minutely correct—The matter of fencing is of no small importance to the agriculturist; especially those who are located on the prairies—any mode promising comparative cheapness, with sufficient strength, and superior durability; must commend itself, if set forth in detail, with demonstration—yet some there are no doubt who will be inclined to question the utility of substituting eight or nine strands of wire, not larger than a small goose quill; for ten sturdy rails of oak, "*staked and ridered*;" or for a good strong plank fence. The contrast is so great, in appearance, between the heavy wooden fencing that we have been so long accustomed to; and the light, airy, scarcely perceptible, wire substitute proposed; that the improvement will probably be only partially adopted for a time, with doubts and hesitancy. But there exists no good reason why iron-wire and posts shall not supersede all other modes of *Farm-fencing*; in the course of a few years. This will doubtless be the case, whenever fencing materials have to be purchased with money. That old deformity, the worm fence, may probably prevail for many years to come, in the interior woodlands, where rails can be had for little or no *cash* expense; but even there, it will be found cheapest and best to use wire to some extent, for enclosing gardens and other *inside* lots.

The comparison that I have drawn, is between plank and wire, showing with sufficient accuracy for a fair illustration, the cost of each, in the construction of strong and efficient fencing, properly fastened to well set posts at proper intervals. The prices of the materials &c., are rated as on the ground where they are to be used say on the average of twenty miles from St. Louis, or other convenient market

For the illustration take one hundred and fifty pannels of twelve feet each—the height to be four feet and six inches; the posts for the plank six feet apart; for the wires twelve feet; both to be strong and sufficient barriers against cattle, horses, sheep, hogs, *and pigs*; and both to be made of the very best materials to be obtained, of plank, posts and wire.

Note —One strand of No. 9 wire, 1800 feet long, will weigh 100 pounds, and will cost not over nine dollars. One string of 12 inch plank, for the bottom, same length, will contain 1800 feet at 1 1-2 cent will cost *twenty-seven* dollars. One string of 6 inch plank, for sides &c., same length, will contain 900 feet, at 1 1-2 cent will cost *thirteen and a half* dollars, the battens 4 cents each, posts 25 cents each, ground poles 4 cents each, nails about 5 cents a pound.

One hundred and fifty pannels or eighteen hundred feet plank fence.

301 cedar posts, - - - - -	at 25 cents		$75,25
150 ground poles or rails - - - - -	4 "		6,00
1 string 12 inch plank, bottom, - - -			27,00

4 strings 6 inch plank, side, - - -	at $13 50	54,00
1 string 6 inch plank, cap, - - -		13,50
301 battens, one to each post, - - -	at 4 cents	12,04
100 pounds nails, 60 to the pound, - -		5,00
Cost of the materials on the ground, - -		$192,79
Setting 301 posts, say 3 cts. each, - - -	$9.03	
Placing and securing ground poles, say - -	3.00	
Carpenter, for fitting and putting up 150 pannels, at, say 15 cts. per pannel, - -	22.50	
		$34.53
The whole probable cost, - - -		$227.32

or say *one dollar and fifty cents* per pannel.

One hundred and fifty Pannels, or eighteen hundred feet Wire Fence.

151 cedar posts at 25 cts. - - - - - -	$37.75
150 ground poles at 4 " - - - - - -	6.00
8 strands No. 9 iron wire, at $9 - - - -	72.00
151 staples, to secure top strand, at 1-2 cts. each -	75
Bracing for 6 or 8 of the posts, say - - - -	1.00
Cost of the materials on the ground, - - -	$117.50
Setting the posts and braces, say - - - -	4.50
Placing and securing the ground poles, - - - -	3.00
Boring the posts, seven holes in each, say - - -	2.00
Fitting and stretching the wires, say - - - -	7 00
Plugging the holes in the posts, say - - - -	1.00
The whole probable cost, - - - - -	$135.00

or *ninety* cents per pannel.

The above cannot be far from correct. It may be safely assumed that the rough plank fence will cost at least fifty cents par pannel more than the wire.

The wires *must* be well coated with some substance to prevent rust. Three coats of white lead paint will be sufficient; which will cost but little, and is easily and quickly applied. The plank estimated in the foregoing statement, is supposed to be in the rough state as taken, from the land, and cannot be painted—it may be white washed however, which will cost at least as much as the painting of the wires.

To put the plank on a fair equality with the wire, it should be neatly planed and thoroughly painted—which would add at least *fifty* cents to the cost of each pannel. No. 9 wire is probably the best size for this use, No. 10 *may* answer, and will cost a trifle less by measure, and *only* a trifle—there is no doubt about No. 9—The wires must be passed *through* the posts, (except the top one) the holes bored with an inch auger, to admit a small paint brush. Stretch the wires *very tight*; this is effected with ease and expedition, by means of a simple contrivance (of my own) with which a common bench screw of wood, is employed with great power and convenience.

Good cedar posts, only twelve feet apart, planted firmly; the wires well stretched and well painted, with a good pole at the bottom to prevent pigs from rooting under; will present an impassable barrier to any animal that ought not to be outlawed—not at all liable to be injured by wind or rain storms—not easily impaired—occupying but little space—not obstructing the view—neat and pretty in appearance; and will be much more likely to endure fifty or sixty years, with a *little* care, than any wooden fence fifteen or twenty years, with *much* care, patching, propping, &c.

To put up the wire fence, requires no machine; a handy man and smart boy will complete *one hundred and fifty* pannels, perfectly, in but little over half the time that it would employ two carpenters to finish the same length of plank fence. Supposing the materials are to be hauled overland ten miles, or any distance; not less than *twenty-two thousand* pounds of wood will be required for the plank fence, including the posts—for the wire and posts, not over *four thousand pounds.*

The foregoing estimates are for *outside* fencing. Many *inside* enclosures, where only the larger animals, horses and cattle, are to be restrained, may be made secure with three or four strands of wire, on posts three and a half or four feet in height—in some instances, even two strands might be sufficient.

The annexed drawing will afford some idea how to arrange the wires.* GEO. C. SIBLEY.

Linden Wood, near St. Charles,
March 9, 1850.

ART. VIII.—COMMERCIAL LAW.

COMMON CARRIERS—BILL OF LADING—LATENT DAMAGE.

The United StatesCircuit Court, in the City of New York have lately made a very important decision relating to common carriers and bills of lading. A quantity of cotton was shipped at N. Orleans for New York. The bills of lading described the cotton as "in good order and well conditioned." Heran, Lees & Co., New York, made advances upon the consignment with these bills. When the cotton was received in New York, it was found to be damaged—what is termed "country damage," which existed in the cotton when it was baled, and not easily detected until the bales are opened. Heran, Lees, & Co., refused to pay freight on account of this damage, and Bradstreet, the carrier, libelled the cotton for the balance of freight. The defence set up was, that the cotton was not delivered in good order,

*We regret that the necessity of going immmediately to press, does not allow time to procure a suitable cut, presenting the drawing referred to. Editors.

and the freight due was less than the damage to the cotton. The proof showed the bad condition of the cotton, and that it probably originated in "country damage." Other facts were stated, from which the jury might infer that the injury was perceptible, when the cotton was shipped, and that the captain had been "negligent and inattentive" in signing the bills of lading.

The Court held that consignees who had made advances, relying on the description in the bill of lading, had a right to deduct the damage to the cotton at the time of shipment, from the freight. Also, that an advance in the price of cotton sufficient to indemnify them against loss could not be taken into consideration, as the consignees were "entitled to the cargo, as described in the bill of lading, as their security for advances, without regard to the fluctuation in the market, or sales to be made at any particular state of prices."

COMMERCIAL STATISTICS.

PORK PACKING FOR 1849-50.

We have delayed the publication of the Pork Packing Statistics of the West, for the purpose of obtaining a full report from Mr. Cist, of the Cincinnati Advertiser, who we regard as the best authority upon this subject. There seems to have been some confusion in the Pork Packing Statistics of the last season, but we imagine that the following Tables may be regarded as sufficiently accurate for all practical purposes. Mr. Cist is entitled to much credit, for his labors in collecting the facts from so wide a range of country. We extract the following remarks which precede his Tables :

Although the season has closed earlier this year than usual, yet it has proved very difficult to complete and correct the early returns of the results. There have been two or three statements published, of which a considerable share are simply estimates, and as far as regards the Scioto and Miami regions, very inaccurate in figures. Several of the details vary from those which compose the present column, and time alone must determine whether any of them in the corresponding ones in mine are more correct.

Ohio	1849-50	1848-49
Cincinnati & Covington,	393,758	410,000
Hamilton,	13,100	
Lebanon,	6,877	8,000
Fanklin,	8,000	
Centreville,	11,600	10,000
Hebron,	21,000	
Bellbrook,	3,200	3,000
Chillicothe,	32,785	64,756
Columbus,	14,964	19,200
Groveport,	2,000	3,500
Winchester,	3,000	

West Jefferson,	4,500	
Circleville,	10,500	14,000
Lockburn,		2,000
Waverly,		2,500
Lancaster,		1,600
Preble county,		20,160
Waynesville & Corwin,		12,000
Wilmington,		4,000
Clarkesville,		2,000
Port Willliam,		13,000
Dayton,		8,600
Springfield,		2,000
	495,194	600,316

INDIANA.

Hagerstown,	500	
Cambridge & Dublin,	13,000	13,000
Milton,	4,000	3,000
Connersville,	18,000	14,000
Laurel,	8,000	12,000
Brookeville & Metamora,	5,000	8,400
Terre Haute,	59,544	47,000
Logansport,	5,000	6,000
Delphi,	10,944	10,000
Lafayette,	38,500	45,000
Attica,	8,100	9,000
Williamsport,	6,600	10,000
Covington,	3,500	5,500
Perrysville,	4,900	8,000
Eugene,	7,600	8,000
Newport,	3,800	5,000
Montezuma,	3,200	4,000
Armysburg,	3,300	2,000
Clinton,	13,000	16,000
Vincennes,	14,500	10,000
Gibson county,	16,000	30,000
Durkee's Ferry	4,500	3,000
Independence,	600	1,500
Americus,	1,300	700
Jeffersonville,	4,500	4,000
Frankford,	2,600	11,000
Lagro,	2,200	2,000
Huntington,	300	900
Fort Wayne,		4,000
Michigan City,	2,100	4,000
Laporte,	2,000	1,500
Madison,	87,709	95,500
Evansville,	20,000	
Indianapolis,	14,000	12,000
Lawrenceburg,	10,000	
	393,471	406,150

ILLINOIS.

Darwin,	3,500	4,000
York, & vicinity,	1,000	
Hendersonville,	3,000	650
Mt. Carmel & vicinity,	5,500	
Shawneetown,	12,000	
Ottawa,	1,700	2,000
Peru,	1,500	3,500
Princeton,	3,700	
Hennepin & Warsaw,	3,500	2,000
Lacon,	11,500	7,000
Chillicothe,	3,800	2,000
Peoria,	21,000	19,500
Galesburg,	1,200	2,000
Washington,	1,000	
Springbay,	500	
Pekin,	26,000	17,000
Westley,	300	
Tremont,	1,000	1,500
Canton,	19,000	10,000
Liverpool,	400	
Lewistown,	750	
Springfield,	19,540	2,350
Lindville,	1,500	
Winchester,	2,000	
Exeter,	2,000	
Beardstown,	31,000	45,750
Naples,	6,500	3,000
Meredosia,	9,000	2,600
Lancaster & Farmington,	6,800	
Ellisville,	1,200	
Abington,	800	
Florence & Pittsford,	3,000	2,500
Perry,	3,000	
Greggsville,	6,000	4,500
Savannah,	350	
Brushville, Macomb & Frederic,	9,000	
Lagrange,	2,000	1,500
Alton,	30,000	27,000
Chicago,	11,500	26,682
Cincinnati,	2,600	
Rockport,	4,000	7,000
Churchville,		2,000
Warsaw,	3,000	9,500
Quincy,	29,000	18,400
Point Isabel,		3,500
Knoxville,		11,000
Lawrenceville,		4,000
Farmington,		4,000
Bath,		800
	303,400	249,832

MISSOURI AND IOWA.

St. Louis,	124,589	89,400
Hannibal,	25,564	18,743
Chester,	1,000	
Sparta,	1,500	
Rockport,	4,000	
Missouri River,		46,300
Keokuk,	19,000	18,000
Burlington,	29,500	15,000
Bloomington,	3,500	9,000
Oquawka,	1,200	9,000
Monmouth,	1,200	
Ruthsburgh,	4,000	
Rock Island,	3,000	
New Boston,	1,000	
Hampton,	3,000	
Wapello,	5,000	
Fort Madison,		8,500
	277,053	213,943

KENTUCKY.

Louisville, New Albany and Jeffersonville,	184,600	179,000

RECAPITULATION.

	1849-50	1848-49
Ohio,	495,194	600,316
Indiana,	398,271	409,150
Illinois,	303,000	249,832
Missouri & Iowa,	227,053	213,943
Kentucky	184,601	179,000
	1,608,129	1,652,231

There are various points of minor importance not included in the above which may swell the above by an addition of 50,000
Cumberland River estimated, 100,000
Baltimore from West do. 100,000
250,000

The corresponding number for 1848-49, under the last three heads was 325,000, exhibited a deficiency of 75,000
Fall off in table, 43,102
118,102

Or a deficiency from last season of seven per cent.

THE IRON TRADE.

We copy the following statistics of the Iron trade of Pennsylvania and Scotland, from the American Railroad Journal. There appears

to be a falling off, of nearly one half in the quantity of Bar and Sheet Iron sent forward from Pennsylvania in 1849, when compared with that of 1848. It would be interesting to know the true cause of this great decline in the Iron business of that State. If it be true that the Iron business cannot be sustained in Pennsylvania at present prices, then, we think, the production must be tranferred to some place farther West. It is the opinion of several experienced individuals with whom we have conversed, that Iron can be profitably produced in Missouri at present prices, and this would be a propitious time to make the experiment, while the business is declining in the East.

TABLE, showing the supplies of Iron sent forward from the interior of Pennsylvania, in 1848 and 1849.

1849—ROUTE.	Bar and sheet, pounds.	Pig and scrap, pounds.	Castings & blooms pounds.	Nails and spikes, pounds.
Chesapeake and Delaware canal, -	4,568,391	41,091,379	3,692,825	925,986
Delaware canal, Bristol, - -	61,696	58,552,532	464,584	742,034
Schuylkill Navigation, - - -	7,963,200	77,490,560	6,354,880	2,582,720
Columbia and Reading railroads, -	10,209,500	2,063,300	1.578,900	2,794,400
Norristown railroad, - - -	4,448,060	5,935,600	2.020,415	
Totals, - - - - -	27,250,847	185,133,371	14,112,405	7,046,147

1848—ROUTE.	Bar and sheet. pounds.	Pig and scrap. pounds.	Castings & blooms. pounds.	Nails & spikes. pounds.
Chesapeake & Delaware Canal, -	4,988,260	88,713,098	5,536,410	1,370,293
Delaware Canal, Bristol - -	1,117,515	50,733,874	109,227	*1,338,415
Schuylkill Navigation, - -	10,223,860	29,205,120	3,071 040	1,485,120
Columb a & Reading Railroads -	18,730,700	7,347,400	4,229,705	7,119,600
Norri.town Railroad, - -	5,866,288	2,564,108	1,672,780	1,672,785
Totals, - - -	50,926,123	178,563,600	14,619,162	12,986,213

*Including 1,337,225 pounds of wire.

From the London Mining Journal.

THE SCOTCH IRON TRADE—ANNUAL RETURNS.

PRICES OF PIG IRON.

Price in	1846.	1847.	1848.	1849.
January, -	£4 0s 0d.	3 13 4	2 8 4	2 7 0
February, -	3 17 6	3 13 4	2 10 0	2 11 7
March, -	3 10 0	3 11 1	2 4 4	2 9 9
April, - -	3 6 0	3 10 8	2 1 9	2 8 0
May, - -	3 10 0	3 5 3	2 2 3	3 3 9
June, - -	3 8 0	3 5 0	2 0 3	2 4 4
July, - -	3 10 0	3 8 1	2 5 6	2 5 0
August, - -	3 15 0	3 7 9	2 5 3	2 5 4
September, -	3 13 6	3 6 0	2 5 3	2 4 0
October, - -	3 0 6	2 19 10	2 3 0	2 2 10
November, -	3 9 0	2 11 0	2 2 9	2 4 8
December, -	3 12 6	2 7 6	2 2 4	2 7 2
Averages, -	3 16 3	3 11 8	3 5 0	2 6 1

PRICES OF COMMON BAR IRON.

	1847.			1848.					1849.		
January,	£9	15s	0d.	8	7	15	5	15	6*a*	—	—
February,	9	10	0	8	7	16	6	5	16*a*	—	—
March,	9	10	0	7	5	0	7	6	15*a*	—	—
April,	9	5	0	7	5	0	6	10	0*a* 5	10	0
May,	9	5	0	6	10	0	6	5	0*a* 5	10	0
June,	9	15	0	6	5	0	5	5	0*a*	—	—
July,	9	10	0	6	5	0	5	10	0*a*	—	—
August,	9	7	6	6	5	0	5	10	0*a*	—	—
September,	9	10	0	6	5	0	5	10	0*a*	—	—
October,	9	5	0	6	0	0	5	7	6*a*	—	—
November,	9	0	0	5	5	0	5	10	0	5 15	0
December,	8	0	4	5	0	0	5	12	6*a* 5	7	5

From Hunt's Magazine.

COMMERCE WITH CALIFORNIA.

THE following table shows the number of vessels, as far as ascertained, that have left the different ports of the United States for California, from the commencement of the excitement to about December 25, 1849:

Ships.	Barks.	Brigs.	Schooners.	Steamers.	Total.
242	219	170	132	12	775

The total arrivals, up to the latest dates, of vessels is 279. The vessels sailed during the last month of 1849, of all classes, amounted to 181.

Whole number of clearances at different ports in the United States for California, since January 1, 1849 has been 698, as follows:

New York,	214	Newburyport,	6	Stonington,	2
Boston,	151	Gloucester,	6	Plymouth,	1
New Bedford,	42	Warren, R. I.	6	Barnstable,	1
Baltimore,	38	Sag Harbor,	6	Mystic, Con.	1
New Orleans,	32	Norfolk,	5	East Machias, Me.	1
Philadelphia,	31	New Haven,	5	Frankfort,	1
Salem,	23	Edgarton,	4	Cherryfield,	1
Bath, Maine,	19	Belfast, Maine,	3	Bridgeport, Con.	1
Portland, Maine,	13	Mobile,	3	New Castle, Me.	1
Bangor,	13	Newport, R. I.	2	Portsmouth N. H.	1
New London,	17	Bristol,	2	Searsport, Me.	1
Providence,	11	Holmes' Hole,	2	Hyannis,	1
Eastport, Maine,	10	Saco, Maine,	2	Norwich Con.	1
Nantucket,	8	Thomaston, Maine,	2		
Fall River,	7	Wilmington, N. C.	2	Total,	698
Charleston, S. C.	7				

Isaac S. Hone, Esq., Assistant Collector of the port of New York, furnishes the following statement of California clearances:—

CUSTOM-HOUSE, NEW YORK, COLLECTOR'S OFFICE, *5th January*, 1850.

Number, description, and tonnage of vessels which cleared from the port of New York, during the year 1849, for San Francisco:—

Vessels.	Tonnage.	Vessels.	Tonnage.
7 Steamers,	3,571	20 Brigs,	4,858
77 Ships,	40,374	30 Schooners,	3,675
60 Barks,	24,413		
Total,			76,981

ARRIVALS OF VESSELS, AND EMIGRANTS AT SAN FRANCISCO IN 1849.

We find in the St. Louis Intelligencer, the following extract from the Alta California:

Capt. E. A. King, harbor master of San Francisco, gives the following official statement of the number of passengers who arrived at that port by sea from April 12th, 1849, to January 29th, 1850:

American, 29,847 males, 919 females, Foreign, 8620 males, 502 females. Total, 38,467 males, 1421 females. Total males and females, 39,888. These have arrived by sea in 805 vessels, to wit:—American, 487; Foreign, 318; total, 805. This number of ships is exclusive of army and navy vessels and steamers which have arrrived during the above period. The amount of tonnage arrived there since April 12th, and to the 29th of January is:—American, 228,429; Foreign, 55,899; total, 284,238.

From Hunt's Magazine.

EXPORTS OF BREAD STUFFS FROM THE UNITED STATES.

We give below a tabular statement of the quantity and value of wheat and rye flour, corn meal, wheat, rye, oats, ship-bread, &c., exported from the United States to foreign countries, during the year commencing on the first day of July, 1848, and ending on the 30th of June, 1849:—

		Quantity.	Value.		Quantity.	Value.
Wheat,	bush.	1,527,534	$1,756,848	Rye Meal,	bbls. 64,830	$218.24
Flour,	bbls.	2,108,013	11,280,582	Rye, Oats,		139,793
Ind. Corn,	busb.	13,257,309	7,966,369	Ship Bread	bbls. 111,372	364,318
Ind. Meal,	bbls.	405,169	1,169,625	Ship bread,	kegs, 21,378	

The total value of the above articles is $22,895,783.

COMMERCIAL REGULATIONS.

TARIFF OF MARINE INSURANCE PREMIUMS.

MINIMUM RATES.

Adopted by the board of Underwriters of the City of St. Louis, January 1, 1850.

The following rates of premium are to be charged as the minimum on all goods, wares and merchandise to be shipped on good sailing vessels,

or steam boats, to or from ports in Europe, Atlantic ports in the United States, ports on the Northern Lakes and ports on the inland rivers in the United States, to and from St. Louis.

To or from European and Atlantic Ports via New Orleans.

To ports in Europe, (excepting ports in the Bay of Biscay, the North and Baltic Seas,) by vessels sailing from New Orleans, on or after October tenth, and before July twentieth. 2 1-2 pr. ct.

By vessels sailing on or after July 10th, and before October tenth. 2 3-4 "

To the above excepted ports one fourth per cent. additional; on tobacco and grain to ports in Europe one fourth per cent. additional to be charged.

From ports in Europe by vessels sailing on or after October first, and before July first, 2 1-2 "

By vessels sailing on or after July first, and before October first, 3 "

To or from Atlantic ports in the United States, 2 1-2 "

To or from Atlantic Ports, Inland Route.

To or from Atlantic ports, via the Ohio River to Wheeling or Pittsburgh by Steamboats, Canals and Railroads, 1 1-4 "

To or from Atlantic ports via the Illinois and Chicago canal, the Lakes, Canal and Railroads, and via Lake and Railroad to Cincinnati and Steamboats to St. Louis, 1 1-2 "

River Risks by good Steamboats.

Mississippi River—To points not below	Cairo,	1-2 "
" " " " "	Memphis,	3-4 "
" " " " "	New Orleans,	1 "
" " To points not above	Illinois River,	1-4 "
" " " " "	Keokuk,	1-2 "
" " " " "	Dubuque,	3-4 "
" " " " "	Fort Snelling,	1 "
Missouri River—To points not above	St. Charles,	1-2 "
" " " " "	Rocheport,	3-4 "
" " " " "	Lexington,	1 "
" " " " "	Westport landing,	1 1-4 "
" " " " "	Savanna,	1 1-5 "
" " " " "	Council Bluffs,	2 "
Illinois River—To points not above	Ottawa,	1-2 "
" " via Canal to	Chicago,	3-4 "
" " " " and Lake to	Detroit,	1 "
" " " " "	Cleveland,	1 1-4 "
" " " " "	Buffalo,	1 1-2 "
Ohio River—To points not above	Louisville, Ky.	5-8 "
" " " "	Cincinnati,	3-4 "
" " " "	Pittsburgh,	1 "
Cumberland River—To points not above	Nashville,	1 "
" " " " "	Gainesboro'	1 1-4 "
Tennessee River—To points not above	Eastport,	1 "
" " " " "	Tuscumbia,	1 1-4 "
" " " " "	Knoxville,	1 1-2 "

Arkansas River—To points not above Post of Arkansas	1 1-2	"
" " " " " " Little Rock	2	
" " " " " " Lewisburg	2 1-2	"
" " " " " " Fort Smith,	3 3-4	"
" " " " " " Fort Gibson,	4 1-2	"
White River—To points not above Batesville,	2 1-2	"
Red River—To points not above Alexandria,	1 1-2	"
" " " " " " Nachitoches,	1 3-4	"
" " " " " " Shreveport,	2	"
" " " " " " Foot of the Raft,	2 1-4	"
" " " " " " White Oak Shoals,	4	"
Osaage River—To points not above Warsaw,	1 1-4	"
" " " " " " Osceola,	1 1-2	"

GENERAL RULES.

Pig Lead, Pig Copper and Pig Iron, shipped from St. Louis or any point on the Mississippi river between St. Louis and Cairo to Atlantic cities, via New Orleans, to be taken at two per cent. premium.

Pig Lead, Pig Copper and Pig Iron, shipped from points on the Ohio and Mississippi rivers, to points on any of the rivers, to be charged twenty-five per cent. less than rate of premiums that is charged on general merchandise to the same points of destination. Specie, Bullion and Gold Dust to be charged one-half the usual rates of premiums that is charged on merchandise in general.

No merchandise or other property to be ensured on any Keel, Canal or Flatboats or Barges, below the Port of St. Louis.

No merchandise or other property to be insured on any Keel or Canal Boat, or Barge towed by any steamboat above the Port of Saint Louis, unless the said Keel or Canal Boat or Barge shall have the certificate of one of the Steamboat Surveyors, stating that she is seaworthy and adapted to carry freight.

Hemp or flax shipped to, or from any port, after the 1st of April, 1850, if baled, pressed and covered with bagging in the same manner as cotton in bales, to be charged the same rates of premium that is charged on merchandise in general to or from similar ports. If baled and pressed, but not covered with bagging, to be charged twice the rate that is charged on merchandise in general.

If baled loose, and not pressed, and not covered with bagging, to be charged four times the rate that is charged on merchandise in general.

When insurance is effected on shipments made to or from points above St. Louis, on the Mississippi, Illinois and Missouri rivers to or from points below Saint Louis, without re-shipment, a deduction of one quarter per centum shall be made from the aggregate rates to and from Saint Louis. If re-shipped at Saint Louis, a deduction of one-eighth per centum.

An additional rate of one eighth of one per cent. to be charged on all goods, wares and merchandise shipped to or from St. Louis, to points above St. Louis, on Keel, Canal Boats or Barges, and on Steamboats towing the same.

For shipments to or from San Francisco, via New Orleans, the rate of premium charged to be four per centum.

MISCELLANEOUS ARTICLES.

MERCANTILE LIBRARY ASSOCIATION OF ST. LOUIS.

We are much gratified to learn, from the fourth annual report of the Board of Directors, that this valuable institution is steadily increasing in the number of its members; and also in its means of usefulness.

In connection with a notice of this institution, we desire to call the attention of our readers to the importance of public libraries and library associations. Society is composed of individuals differing in intellect, education, habits and taste; and hence those who would be instrumental in improving its condition, should aim to diversify, as much as practicable, the manner and means of instruction.

Although, we hold that, a desire for knowledge and a love of virtue, are inherent properties of man's nature, yet, each individual inclines to the investigation of some particular class of subjcets; and, if from any cause, this inclination should not be indulged, the desire, in time, abates, and he is left in imminent danger of being misled by his propensities and passions. An extensive and well selected library may afford subjects for the gratification of every taste, and conseqently, be the means of preventing many from falling into habits of vice. Satisfactory evidence is afforded by the Report of the Directors, that the citizens of St. Louis are beginning to appreciate the means of instruction and improvement afforded by this institution. The Directors say: "You will be ready to enquire if the members of the Association have appreciated the rich provision made for them? Have they read more than heretofore? Since the last annual meeting 4,743 volumes have been issued to 412 members, for which 3,663 entries were made in the register. As compared with 1848, this is an increase of readers of sixty per cent., and, as compared with 1847, an increase of more than three hundred per cent.

The number of books delivered, is fifty-eight per cent. more than in 1848, and nearly one hundred and twenty-five per cent. more than in 1847. The excess over 1846, the first year of the existence of the Association, is much larger. These statistics are truly encouraging. They show a regular and rapid increase of readers and of reading.

While this shall continue, the Library is safe, and will flourish, for a love of reading grows by what it feeds upon, and strengthens by indulgence, and the warmest, steadiest friends of the Library will ever be seen among those in whom this love has acquired the force of insatiable desire. But we are able to add another fact, which gives a higher value to the rest. It was observed, that, of the books issued in 1849, for perusal, there was an enlarged proportion of works of a useful and instructive sort. This is progress in the right direction—affords pleasing evidence of the growing usefulness of the Association, and, while uninterrupted, will warrant a confident prediction of the happiest effects on the mercantile community, and on society in general."

We observe, with no ordinary degree of satisfaction, the evidence of a growing demand for "useful and instructive" books. This is a fact of more importance to this immediate community, and to the people of the West in general, than any which has come to our knowledge for many years—of more value than the acquisition of California with all its treasures.

Let a desire for useful knowledge, and the means of its attainment become general, and it shall not be long before this great Valley will present a spectacle of moral power, which will be the admiration of mankind. And who will have done more, in giving a wise direction to the public mind, than the philanthropic and enterprising founders of the "Mercantile Library Association of Saint Louis"

The following statistics are extracted from the report:

"Since the last annual meeting, we have expended, for books and periodicals, $1,888 40 as follows, viz:

"For 33 folios; 60 quartos; 462 octavos; 456 duodecimos; 49 smaller—in all 1,060 volumes.

There have been presented, in the same, 470 volumes, valued at $714 68, viz: "22 folios; 30 quartos; 140 octavos; 167 duodecimos; 111 smaller—in all 470.

"The additions to the Library, in the last twelve months, including books bought and presented were—55 folios; 90 quartos; 602 octavos; 623 duodecimos; 160 smaller—in all 1,530 volumes. Total value, $2,603 08. The number of volumes now belonging to the Association, is 4,299 as follows, viz:—65 folios; 247 quartos; 2,269 octavos; 1,264 duodecimos; 454 smaller---4,299."

There are now thirty life members, two hundred and eleven proprietors, three hundred and six clerks and one hundred and forty-two beneficiaries—making the whole number of members at this time, five hundred and eighty-nine. Of these, three hundred and eleven have been added since the last annual report.

We earnestly commend this institution to the patronage of our citizens; there are few whose means are not sufficient to afford them access to its rich treasures; and there are very few, we imagine, who would not, during the time devoted to reading, spend more money in some other way less profitable to themselves and less useful to society.

JOHN P. M'MURRAY JAMES M. DORMAN

M'MURRAY & DORMAN,

IRON RAILING MANUFACTORY corner of Third and Pine Streets, continue to manufacture at the above establishment, all kinds of Plain and Ornamental Iron Railing, Balconies, Bank and Jail Doors, Book Safes, Fire-Vaults, Iron Window Shutters, Iron Awnings, Lightning Rods, Bedsteads, Gratings, and in fact, any thing which can be formed of Iron.

BURD, RUCKER & CO.,

No. 45 Main Street, St. Louis Missouri,

MANUFACTURERS of Copper, Tin and Sheet Iron Ware, Lead Pipe, Sheet Lead, Bells weighing from 20 to 400 pounds, Brass Castings, Beer and Soda pumps, and general Stove Dealers.

WESTERN BANK NOTE,

Card, Seal, and General Engraving Office,

No. 25 Chesnut Street, nearly opposite the Republican Office,

BANK NOTES, Bills of Exchange, Bill Heads, Diplomas, Business, Professional, Visiting Wedding and other Cards,; Notarial, County, Odd Fellows, Sons of Temperance, Masonic and Probate Seals: Wood Cuts, Xylographic Plates, Stencil Brands, Jewelry, Silver Ware, &c., engraved in a superior manner by

R. L. CAMPBELL.

N. B. Druggists' Lables, of every description, engraved and printed.

M. TARVER,

ATTORNEY AND COUNSELLOR AT LAW,

No. 97 Chesnut Street, St. Louis,

(TWO DOORS WEST OF THE POST OFFICE.)

T. F. RISK,

ATTORNEY AND COUNSELLOR AT LAW,

Office—23 1-2 Second street,

Between Pine and Chesnut Streets, in the same building with the United States Land Office,

St. Louis, Mo.

CHARLES & HAMMOND,

BOOK AND JOB PRINTERS,

Chesnut Street,

St. Louis Mo.

THE WESTERN JOURNAL,

PUBLISHED MONTHLY.

DEVOTED TO

AGRICULTURE, MANUFACTURES, MECHANIC ARTS, INTERNAL IMPROVEMENT, COMMERCE, AND GENERAL LITERATURE.

M. TARVER & T. F. RISK, Editors and Proprietors.

TERMS—THREE DOLLARS PER ANNUM, IN ADVANCE.

PUBLICATION OFFICE:
No. 97, CHESNUT STREET, 2 doors West of the Post Office.

The Western Journal is designed to embrace every subject connected with Agriculture, Commerce, Manufactures, Mechanic Arts, Mines, and Internal Improvement.

A portion of the work will be appropriated to Statistics, which will be collected and arranged with reference to the leading subjects contained in the respective numbers.

The development of the vast resources of the valley of the Mississippi, and the improvement of the intellectual and social condition of its inhabitants, will be constantly kept in view; and the leading article of each number will be devoted to the advancement of these objects. In attempting to illustrate and give direction to the economy connected with the leading pursuits of the country, the Editors have undertaken more than has been done, or proposed by any other journal with which they are acquainted. And it is by their labors in this department, mainly, that they expect to make the work useful.

Contributions are solicited on all subjects properly embraced in the design of the work.

☞ Clubs, composed of three individuals, will be furnished with the Western Journal at the rate of $2 50 per annum. Five at $2,00.

☞ Owing to the enlargement of the work, six numbers will hereafter constitute a volume, and a general Index will be made out to accompany the 6th and 12th numbers.

☞ Publishers of Newspapers who will give the foregoing prospectus one or more insertions in their papers, and pay one dollar, will be furnished with the work for one year.